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PUBLIC HEALTH BULLETIN

ISSUED MONTHLY

BY THE

STATE DEPARTMENT OF HEALTH

OF MASSACHUSETTS

JANUARY, 1917 - Dec. 1917

Vol. 4, No. 1 – 12

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

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The Common Health of the Commonwealth

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Publication of this Document
approved by the
Supervisor of Administration.

DIVISION OF HYGIENE.

Lecture Service and Moving Pictures.

THE lecture service inaugurated by the State Department of Health late in 1915 has become well established. During the year ending Nov. 30, 1916, twenty-three persons connected directly with the Department, or under its auspices, gave 628 lectures in 183 towns, the total attendance aggregating approximately 100,000.

These lectures, in many instances, were illustrated with lantern slides relating to various health subjects. A collection of several hundred slides appropriate for this purpose has been accumulated, and new slides are constantly being added aptly demonstrating a point or referring to some local scene or condition.

With such a collection of slides it becomes possible to select a set to illustrate many of the subjects presented in lectures, with special reference to the local conditions of the community where the lecture is to be given, or to choose a set of slides intended to illustrate the subject in which a local organization is particularly interested.

No charge is made for this lecture service, either as to fees or expenses. It is desired, whenever it can be reasonably arranged, that the meeting be made an open one so that knowledge of the work of the Department may be as widespread as possible.

The following summary will serve to illustrate some of the topics discussed in the lecture service rendered during the past year: —

The State Department of Health, its organization; its relation to other departments and to local boards of health; its work and the facilities afforded physicians and local health authorities in the prevention and treatment of disease; its educational work, health exhibits, etc.

Communicable diseases, comprising diseases declared dangerous to the public health; methods of infection and transmission; disease prevention and control; epidemics and their control; vaccines and their use; insects in their relation to the spread of disease, etc.

Tuberculosis, its spread and control; the value of tuberculosis hospitals and dispensaries; the work of anti-tuberculosis associations and the district nursing societies in the control of tuberculosis; tuberculosis in childhood, etc.

Child hygiene, including infant mortality and its prevention; infant hygiene and feeding; oral hygiene; industrial hygiene; the establishment of girls' health leagues among school girls, and specially prepared talks to young children teaching them how to keep well.

School hygiene, what it means, covering medical school inspection and the part it plays in the prevention of disease and correction of defects among school children; the subject of school lunches, open-air rooms, etc.

Rural hygiene, including rural sanitation and sewage disposal, health on the farm and various rural health problems.

Public health nursing, its importance in carrying on public health education; its value in the prevention of infant mortality, in tuberculosis and other communicable disease work; its necessity in school and industrial welfare.

The prevention of diseases of adult life, including those resulting from "wear and tear," emphasizing the importance of early treatment of suspicious tumors to prevent the spread of cancer; the necessity for frequent physical examinations to detect the onset of heart and kidney diseases, or to insure proper treatment if they are already present, and the value of moderation in work, exercise, diet and rest.

Quackery and patent medicines, calling attention to the prevalence of quackery and to the widespread use of injurious preparations which often contain a large proportion of alcohol or dangerous drugs, or both, the continued use of which may lead to serious results.

Pure food and food inspection, explaining food values, laws, rules and regulations relative to food and drugs, slaughtering and cold storage of foods.

Milk, its value as a food and the importance of cleanliness in its production, distribution and care, in order to prevent its serving as a vehicle of infection, including examples of diseases spread in this manner.

It will save unnecessary correspondence, confusion and delay if, when lectures are requested, detailed information is given in the original application. Such information should include —

1. The name and location of the place of meeting.
2. The date and hour.
3. If an illustrated lecture is desired do not fail to state whether a lantern is available, and if not, whether the place of meeting has electrical connection for the use of a portable lantern.
4. Information as to the probable size and character of the audience will be appreciated.
5. Please indicate the subject desired and any special problems as related to your own community.

Moving-picture Films.

The Department has several moving-picture films relating to health subjects, which are available for exhibition in connection with health weeks or health exhibits. They may also follow health lectures, if desired, in cases where the lecture hall is equipped for moving pictures in the manner required by law. The following films are listed: —

"Bringing it Home."
Relating to infant welfare and the public health nurse.

"The Long *versus* the Short Haul."
Relating to the importance of breast feeding as compared with bottle feeding, and showing the results of using milk improperly cared for, secured from dirty, ill-kept dairies.

"In his Father's Footsteps."
Referring to farm sanitation, milk and its relation to typhoid fever.

"The Temple of Moloch."
"The Price of Human Lives."
"The Great Truth."
Three films relating to tuberculosis, showing conditions under which it occurs and measures needful to overcome it; illustrating the work of the tuberculosis nurse.

"The Price of Thoughtlessness."
Illustrating consequences of carelessness resulting in accidents which could have been prevented.

"Toothache."
Illustrating the value of proper care of the teeth, and teaching their regular cleansing.

"Fly Danger."
Showing how flies breed, their habits and how they may spread infection.

These films are much in demand, and it will be of advantage to make requests for their use well in advance of the desired date.

REPORT OF DIVISION OF FOOD AND DRUGS.

DURING the month of December, 1916, samples were collected in 36 cities and towns.

There were 338 samples of milk examined, of which 50 were below the legal standard, 14 contained added water, and 3 were skimmed samples not properly labeled. There were 285 samples of food examined, of which the following were adulterated: 6 samples of Hamburg steak containing sulphites and not so labeled; 1 sample of sausage containing starch in excess of 2 per cent.; 30 samples of nuts which were either decomposed, mouldy or wormy; 1 sample of olive oil containing cottonseed oil; 5 samples of scallops containing added water; and 1 sample of decomposed shrimp. There were 40 samples of eggs sold as strictly fresh eggs. Examination of these eggs showed them not to be strictly fresh, and in some instances very nearly reaching the point where they could be called decomposed. In the wholesale egg trade the term "fresh eggs" means any eggs which have not been placed in cold storage, in water glass or which are not rotten. An attempt is being made to prosecute these cases, but owing to the lack of a precedent it has been difficult to secure a complaint. A case is to be tried in the Stoughton court in the near future.

There were 77 samples of drugs examined, of which 4 were adulterated. These consisted of spirit of camphor, spirit of peppermint and tincture of iodine, somewhat deficient in the active ingredient.

There were 29 convictions obtained for violation of the law, $500 in fines being imposed. S. C. Kaufman of Attleboro, on three counts, John F. McAdams of Chelsea and Michael Perry of Attleboro were convicted for violation of the milk laws. S. C. Kaufman appealed two of his cases. John Barzakian of Brookline, Morris Burg of Quincy, Benjamin F. Folsom of Boston, Howard E. Foote of Attleboro, L. Henry Godin of Weymouth, Patrick Jennesco of Mansfield, Charles Krancewick of Stoughton, H. Sichel of Boston, Constantino Spiropoulos of Boston, on two counts, Samuel Walters of Boston, The Wason Company of Boston, Jas. Frank Williams, Inc., of Lynn, William Yauss of Stoughton and Isador Yockelman of Chelsea were convicted for violation of the food laws. Howard E. Foote of Attleboro and Isador Yockelman of Chelsea appealed their cases. Hipolop Danosky of Waltham, on two counts, was convicted for violation of the cold-storage laws. Walter Blair of Middleborough, Henry S. Freeman of Norton, on two counts, Benjamin Kriger of Pittsfield, on two counts, Henry Kruger of Sterling and Frank Moskoff of Middleborough were convicted for violation of the slaughtering laws. In addition to the foregoing cases Philip Katz of Brockton was held for the grand jury on the charge of selling tuberculous lungs to a sausage factory.

There were 25 confiscations made, of which 13 were of articles in cold storage. These consisted of 3,840 pounds of broken-out eggs, 1,500 pounds of pigs' feet, and 600 pounds of pigs' hocks. The other 12 confiscations consisted of 130 pounds of immature veal, 6 pounds of chicken, 39 pounds of geese, 3 pounds of bacon, 3 pounds of sausage, 17 pounds of ham, 30 pounds of salt pork, 2 pounds of pork spare ribs and 19 pounds of mutton, all of which were decomposed.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF DECEMBER, 1916.

The following gives the total number of bacteriological examinations made in the laboratory of the State Department of Health during the month of December, 1916: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria,	1,788	122	1,363	92	211

	Number of Examinations.	Positive.	Negative.
Tuberculosis,	274	71	203
Typhoid fever (Widal test),	93	24	69
Typhoid fever (culture test),	32	3	29
Malaria,	2	–	2
Miscellaneous,	165		

Total number of examinations made, 2,354.

The following gives the total number of biological products and diagnostic outfits distributed by the State Department of Health during the month of December, 1916: —

Biological Products.

Diphtheria antitoxin: —	
12,000 units (special for the Boston City Hospital),	111 bottles.
6,000 units (special for the Boston City Hospital),	43 bottles.
4,000 units (special for the Boston City Hospital),	71 bottles.
3,000 units,	4,216 bottles.
2,000 units (special for the Boston City Hospital),	17 bottles.
1,500 units,	1,273 bottles.
750 units,	376 bottles.
Smallpox vaccine: —	
Capillary tubes,	5,384
Bulk,	150
Typhoid vaccine: —	
Ampoules,	864
Bulk,	600
Antimeningitis serum,	92 bottles.
Silver nitrate solution,	3,012 ampoules.

Diagnostic Outfits.

Culture tubes,	2,159
Sputum bottles,	355
Widal outfits,	78
Bile outfits,	21
Malaria-Gonorrhœa outfits,	7

RÉSUMÉ OF COMMUNICABLE DISEASES FOR DECEMBER, 1916.

I. General Prevalence.

The incidence of all the common communicable diseases continues to maintain a lower level than for the corresponding month of last year. This drop is particularly noticeable for typhoid fever, which has been below the average throughout the year.

II. Epidemics and Outbreaks.

Anterior Poliomyelitis. — The epidemic of infantile paralysis apparently is now definitely over. Sporadic cases, however, still continue to crop out in widely separated communities.

Diphtheria. — Several outbreaks of this disease have occurred during the month. Gardner reported 50 cases, which were confined to one school. Investigation showed that the source of infection was probably due to contact with unrecognized carriers and active cases. Wholesale culturing and immunizing checked the spread of the disease. Fourteen cases were reported from Webster. These proved not to be milk-borne, and were not confined to any particular locality or school. A small outbreak occurred in Holyoke in a hospital ward. Energetic measures were taken and there was no further spread.

Scarlet Fever. — An unusual number of cases of this disease was reported from Westfield during December, totaling 23, and making 59 in all since September. Carelessness on the part of certain families allowed the infection to get a start. The spread was apparently due to contact with unrecognized cases. The city of Worcester showed a total of 46 cases during the month of December, exactly double its endemic index. Unrecognized carriers were apparently the cause for the spread of this disease here.

Measles. — A considerable outbreak of this disease is in progress in Fall River. Other cities and towns as well share in this undue prevalence, notably Lowell, Framingham, Ayer, Reading, Salisbury, Leominster, Malden and Medford.

III. DISTRIBUTION.

All Communicable Diseases.

	November, 1916.	December, 1916.	December, 1915.
Total cases, ...	3,592	4,704	5,403
Case rate per 100,000 population, . .	95.3	124.7	146.5

Common Diseases.

	November, 1916.	December, 1916.	December, 1915.	Cities and Towns which have markedly exceeded their Endemic Index.[1]
Diphtheria: —				Cambridge, . . (29) 51 Canton, . . . (0) 8 Quincy, . . . (5) 12 Everett, . . . (5) 16 Methuen, . . (1) 8 Webster, . . . (1) 17 Gardner, . . . (4) 53 Chicopee, . . . (6) 12 Ludlow, . . . (1) 9 West Springfield, . (0) 6
Total cases, ...	612	775	1,019	
Case rate per 100,000 population, .	16.2	20.3	27.6	
Measles: —				Fall River, . . (5) 240 Malden, . . . (6) 33 Reading, . . . (1) 58 Salisbury, . . (0) 32 Lowell, . . . (10) 109 Medford, . . . (4) 36 Framingham, . . (3) 134 Ayer, . . . (0) 57 Leominster, . . (2) 24
Total cases, ...	714	1,054	1,310	
Case rate per 100,000 population, .	18.9	27.9	35.5	
Scarlet fever: —				Dighton, . . . (0) 5 Taunton, . . (3) 11 Milton, . . . (3) 10 Everett, . . . (8) 17 Woburn, . . . (1) 10 Natick, . . . (1) 10 Westfield, . . (2) 23 Greenfield, . . (2) 17 Montague, . . (2) 10 Springfield, . . (10) 30 Marion, . . . (0) 5 Lynn, . . . (4) 9
Total cases, ...	390	578	845	
Case rate per 100,000 population, .	10.3	15.3	22.9	
Typhoid fever: —				
Total cases, ...	116	79	149	
Case rate per 100,000 population, .	3.1	2.1	4.0	
Whooping cough: —				Haverhill, . . (8) 17 Needham, . . (0) 39
Total cases, ...	202	170	760	
Case rate per 100,000 population, .	5.3	4.5	20.6	
Tuberculosis, pulmonary: —				
Total cases, ...	521	678	572	
Case rate per 100,000 population, .	13.8	17.9	15.5	
Tuberculosis, other forms: —				
Total cases, ...	44	43	50	
Case rate per 100,000 population, .	1.2	1.1	1.3	

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

Rare Diseases. — Anthrax was reported from North Adams (1) and Winchester (1).

Cerebrospinal meningitis was reported from Boston (2), Greenfield (1), Hingham (1), Malden (1), Marlborough (1), Salem (1) and Springfield (2).

Dogbite (by known or suspected rabid dogs) was reported from Brockton (1), Chelsea (1), Lowell (2) and Needham (1).

Dysentery was reported from Boston (5), Clinton (1) and Fall River (1).

Malaria was reported from Newton (2) and Springfield (1).

Pellagra was reported from Taunton Insane Hospital (1) and from Tewksbury State Infirmary (1).

Septic sore throat was reported from Barnstable (9) Boston (3), Cambridge (1) and Westfield (1).

Smallpox was reported from Boston (1).

Tetanus was reported from Boston (1) and Natick (1).

Trachoma was reported from Attleboro (1), Boston (6), Chelsea (1), Lawrence (1), Salem (1) and Taunton (1).

OCCUPATIONAL DISEASES REPORTED BY STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	Occupation.	Sex.	Age.	Color
Analine oil poisoning,	Tire maker,	M	30	W
Anthrax,	Tanner,	M	30	W
Anthrax,	Worker woolen weave room,	M	16	W
Anthrax,	Tanner,	M	46	W
Caisson,	Lock tender,	M	38	W
Lead poisoning,	Painter,	M	39	W
Lead poisoning,	Painter,	M	41	W
Lead poisoning,	Wire worker,	M	27	W
Lead poisoning,	Paper hanger,	M	31	W
Lead poisoning,	Linotype operator,	M	45	W
Lead poisoning,	House painter,	M	30	W
Lead poisoning,	House painter,	M	37	W
Lead poisoning,	Wire worker,	M	29	W
Lead poisoning,	Lead worker,	M	35	W
Lead poisoning,	Bundle boy, Ipswich Mills,	M	19	W
Lead poisoning,	Painter,	M	59	C
Lead poisoning,	Ship building,	M	–	W
Lead poisoning,	Painter,	M	40	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1916.	Total Deaths from All Causes.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts, ...	3,779,033	4.305	179	47	347	1	612	64	23	–	714	5
2	CITIES OVER 500,000.												
3	Boston, ...	763,529	995	41	16	80	–	107	16	2	–	53	2
4	CITIES, 150,000–200,000.												
5	Worcester, ...	166,735	207	1	–	6	–	29	1	–	–	40	2
6	CITIES, 100,000–150,000.	*563,343*	*710*	*22*	*4*	*35*	–	*135*	*17*	*5*	–	*193*	–
7	Fall River, ...	126,119	148	–	–	6	–	12	1	1	–	122	–
8	New Bedford, ...	112,689	139	–	–	15	–	11	3	–	–	24	–
9	Cambridge, ...	109,785	119	9	1	5	–	45	2	1	–	7	–
10	Lowell, ...	108,385	166	–	1	2	–	33	6	2	–	38	–
11	Springfield, ...	106,365	138	13	2	7	–	34	5	1	–	2	–
12	CITIES, 50,000–100,000.	*453,749*	*492*	*29*	*9*	*52*	–	*72*	*6*	*3*	–	*11*	*1*
13	Lynn, ...	97,366	105	7	2	33	–	18	1	1	–	1	–
14	Lawrence, ...	91,314	109	–	–	2	–	15	–	–	–	3	1
15	Somerville, ...	89,178	83	9	1	5	–	15	3	–	–	1	–
16	Brockton, ...	63,590	50	1	–	12	–	4	–	1	–	2	–
17	Holyoke, ...	61,562	91	12	6	–	–	8	1	–	–	1	–
18	Haverhill, ...	50,739	54	–	–	–	–	12	1	1	–	3	–
19	CITIES AND TOWNS, 25,000–50,000.	*534,149*	*504*	*34*	*9*	*33*	–	*87*	*11*	*2*	–	*37*	–
20	Malden, ...	49,996	46	7	1	–	–	12	1	–	–	20	–
21	Chelsea, ...	46,078	44	1	–	4	–	5	1	–	–	5	–
22	Newton, ...	43,912	38	3	1	4	–	2	–	–	–	–	–
23	Quincy, ...	42,615	32	7	2	2	–	10	–	–	–	2	–
24	Pittsfield, ...	41,416	40	–	–	–	–	1	–	–	–	–	–
25	Fitchburg, ...	40,098	45	1	2	3	–	19	4	1	–	5	–
26	Everett, ...	38,741	32	2	–	7	–	4	–	–	–	–	–
27	Salem, ...	38,662	54	1	1	3	–	1	–	–	–	–	–
28	Taunton, ...	36,621	59	1	–	4	–	6	2	–	–	–	–
29	Brookline, ...	34,867	38	2	1	–	–	1	–	–	–	–	–
30	Medford, ...	32,286	20	1	1	1	–	1	–	–	–	3	–
31	Chicopee, ...	31,283	26	3	–	–	–	10	3	1	–	2	–
32	Waltham, ...	30,715	20	4	–	5	–	2	–	–	–	–	–
33	Revere, ...	26,859	10	1	–	–	–	13	–	–	–	–	–
34	CITIES AND TOWNS, 10,000–25,000.	*547,500*	*558*	*32*	*6*	*79*	–	*84*	*6*	*5*	–	*231*	–
35	Gloucester, ...	24,497	26	2	–	–	–	2	1	–	–	–	–
36	Beverly, ...	24,001	20	3	1	1	–	–	–	–	–	–	–
37	Northampton, ...	22,191	39	2	–	1	–	–	–	–	–	9	–
38	North Adams, ...	22,039	30	1	–	–	–	–	–	–	–	9	–
39	Peabody, ...	19,327	18	–	–	7	–	–	–	–	–	–	–
40	Attleboro, ...	19,027	16	–	–	–	–	3	–	–	–	–	–
41	Westfield, ...	18,983	23	–	–	–	–	13	–	–	–	1	–
42	Leominster, ...	17,662	16	–	–	9	–	6	1	–	–	87	–
43	Watertown, ...	17,395	9	–	–	3	–	4	–	1	–	–	–
44	Melrose, ...	17,161	18	1	–	1	–	–	–	–	–	–	–
45	Gardner, ...	16,781	14	1	–	16	–	24	2	–	–	31	–
46	Woburn, ...	16,676	13	–	–	2	–	3	1	–	–	–	–
47	Framingham, ...	16,564	20	–	–	5	–	–	–	–	–	91	–
48	Arlington, ...	15,784	13	3	–	2	–	1	–	–	–	–	–
49	Marlborough, ...	15,412	9	–	–	–	–	2	–	–	–	–	–
50	Newburyport, ...	15,398	18	1	–	4	–	–	–	–	–	–	–
51	Methuen, ...	14,625	12	1	–	1	–	2	–	–	–	–	–

TO THE PUBLIC HEALTH, NOVEMBER, 1916.

19C		38A		7		28		29-35		1		8		61A		4		100		24		
Mumps.		Ophthalmia Neonatorum.		Scarlet Fever.		Tuberculosis, Pulmonary.		Tuberculosis, Other Forms.		Typhoid Fever.		Whooping Cough.		Cerebrospinal Meningitis.		Malaria.		Septic Sore Throat.		Tetanus.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
175	-	159	-	390	4	519	309	44	69	116	8	202	14	9	11	24	-	14	4	6	1	1
																						2
46	-	64	-	58	-	149	67	12	22	14	2	32	4	-	-	1	-	-	-	1	-	3
																						4
3	-	12	-	33	-	23	10	-	3	4	-	-	-	1	2	1	-	-	1	2	-	5
5	-	*31*	-	*68*	-	*94*	*51*	*15*	*15*	*31*	*1*	*18*	*2*	*3*	*2*	*21*	-	*1*	*2*	*1*	-	6
-	-	6	-	5	-	33	13	1	4	14	1	7	1	1	-	21	-	-	-	1	-	7
2	-	6	-	7	-	15	12	4	5	4	-	7	1	-	-	-	-	-	1	-	-	8
1	-	7	-	14	-	24	13	1	1	2	-	1	-	-	-	-	-	1	-	-	-	9
-	-	8	-	22	-	14	9	2	3	5	-	-	-	2	2	-	-	-	1	-	-	10
2	-	4	-	20	-	8	4	7	2	6	-	3	-	-	-	-	-	-	-	-	-	11
6	-	*16*	-	*26*	*1*	*67*	*37*	*3*	*3*	*17*	*2*	*26*	*2*	*2*	-	-	-	*1*	-	-	-	12
1	-	4	-	6	-	16	6	1	-	5	-	-	-	2	-	-	-	-	-	-	-	13
-	-	2	-	7	1	15	14	-	1	5	1	6	-	-	-	-	-	-	-	-	-	14
2	-	-	-	1	-	8	9	-	1	2	-	-	-	-	-	-	-	1	-	-	-	15
3	-	-	-	2	-	15	2	-	-	2	-	6	-	-	-	-	-	-	-	-	-	16
-	-	4	-	3	-	10	4	-	1	3	1	-	1	-	-	-	-	-	-	-	-	17
-	-	6	-	7	-	3	2	2	-	-	-	13	1	-	-	-	-	-	-	-	-	18
27	-	*19*	-	*43*	-	*69*	*30*	*9*	*11*	*14*	-	*30*	*1*	*2*	*3*	*1*	-	-	-	-	-	19
-	-	4	-	3	-	3	2	-	2	-	-	1	-	-	-	-	-	-	-	-	-	20
1	-	4	-	2	-	4	2	-	-	2	-	-	-	-	-	-	-	-	-	-	-	21
15	-	2	-	1	-	5	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	22
1	-	2	-	2	-	9	-	-	1	-	-	8	-	-	-	-	-	-	-	-	-	23
-	-	-	-	6	-	3	3	-	-	-	-	-	-	1	1	1	-	-	-	-	-	24
1	-	2	-	-	-	12	1	2	1	-	-	1	-	1	1	-	-	-	-	-	-	25
-	-	1	-	4	-	6	2	-	2	4	-	-	-	-	1	-	-	-	-	-	-	26
-	-	1	-	-	-	7	3	1	2	1	-	8	-	-	-	-	-	-	-	-	-	27
-	-	-	-	14	-	10	9	-	1	1	-	-	-	-	-	-	-	-	-	-	-	28
2	-	-	-	-	-	1	1	3	-	-	-	3	-	-	-	-	-	-	-	-	-	29
-	-	2	-	1	-	1	2	2	-	-	-	-	1	-	-	-	-	-	-	-	-	30
-	-	-	-	9	-	2	1	1	1	-	-	2	-	-	-	-	-	-	-	-	-	31
7	-	1	-	1	-	1	2	-	-	4	-	7	-	-	-	-	-	-	-	-	-	32
-	-	-	-	-	-	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
72	-	*6*	-	*87*	*1*	*47*	*31*	*3*	*9*	*18*	*3*	*21*	*1*	-	*1*	-	-	*5*	-	*2*	*1*	34
-	-	1	-	-	-	4	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	35
-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
3	-	-	-	1	-	7	1	-	1	2	-	1	-	-	-	-	-	-	-	-	-	37
-	-	-	-	7	-	2	2	1	-	2	1	-	-	-	-	-	-	-	-	1	1	38
-	-	-	-	-	-	4	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	39
-	-	1	-	3	-	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	40
2	-	-	-	16	1	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	41
1	-	2	-	2	-	2	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	42
20	-	-	-	-	-	1	-	1	-	2	-	1	-	-	-	-	-	-	-	-	-	43
-	-	-	-	1	-	1	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	44
-	-	-	-	9	-	2	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	45
-	-	-	-	17	-	-	1	-	1	1	-	-	1	-	-	-	-	-	-	-	-	46
36	-	-	-	4	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	47
1	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
1	-	-	-	2	-	2	2	-	-	-	-	1	-	-	1	-	-	-	-	-	-	49
2	-	-	-	2	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	50
-	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	51

Cases and Deaths from Diseases Dangerous

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1916.	Total Deaths from All Causes.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,605	11	–	–	–	–	1	–	–	–	–	–
53	Weymouth,	14,229	15	–	–	–	–	–	–	–	–	–	–
54	Milford,	13,836	20	–	–	2	–	–	–	–	–	–	–
55	Winthrop,	13,393	9	–	–	–	–	–	–	2	–	1	–
56	Adams,	13,264	11	3	–	3	–	4	1	1	–	–	–
57	Clinton,	13,220	17	–	–	4	–	–	–	–	–	1	–
58	Greenfield,	13,151	11	1	–	1	–	1	–	–	–	–	–
59	Plymouth,	13,116	8	–	–	–	–	1	–	1	–	–	–
60	Wakefield,	13,114	18	4	4	1	–	1	–	–	–	–	–
61	Webster,	12,820	10	–	–	–	–	5	–	–	–	–	–
62	West Springfield,	11,850	12	2	1	–	–	3	–	–	–	–	–
63	Norwood,	11,693	6	–	–	3	–	1	–	–	–	–	–
64	Danvers,	11,601	34	–	–	1	–	–	–	–	–	–	–
65	Dedham,	11,468	15	3	–	–	–	2	–	–	–	–	–
66	Natick,	11,442	18	2	–	2	–	1	–	–	–	–	–
67	Saugus,	10,753	6	–	–	–	–	–	–	–	–	–	–
68	Winchester,	10,173	4	2	–	10	–	2	–	–	–	–	–
69	Easthampton,	10,164	10	–	–	–	–	1	–	–	–	1	–
70	Athol,	10,084	9	–	–	–	–	1	–	–	–	–	–
71	Towns, 5,000–10,000.	*355,569*	*419*	*14*	*2*	*32*	*1*	*50*	*2*	*1*	–	*59*	–
72	Towns, 2,500–5,000.	*185,118*	*205*	*1*	–	*12*	–	*25*	*3*	*4*	–	*37*	–
73	Towns under 2,500.	*209,342*	*215*	*5*	*1*	*18*	–	*23*	*2*	*1*	–	*53*	–

In addition to the above there occurred 1 case of anthrax in Salem; 14 cases and 1 death from dog bite, 2 in Attleboro, 1 in Boston and 1 in Lowell; 3 cases and 6 deaths from pellagra, 1 case and death in Westborough and 1 case and 1 death in Worcester; 14 cases of smallpox, 1 in Chicopee and 13 1 in Lynn and 11 in Springfield.

to the Public Health — *Concluded.*

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		4 Malaria.		100 Septic Sore Throat.		24 Tetanus.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
-	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	52
-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53
-	-	1	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
-	-	-	-	1	-	3	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	55
-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	56
-	-	-	-	1	-	-	2	-	-	-	-	14	-	-	-	-	-	-	-	-	-	57
-	-	1	-	1	-	2	2	-	-	1	-	-	-	-	-	-	-	1	-	-	-	58
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
-	-	-	-	-	-	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	61
-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	62
-	-	-	-	6	-	1	1	-	1	-	-	-	-	-	-	-	-	1	-	-	-	63
-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64
-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65
6	-	-	-	3	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	66
-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67
-	-	-	-	3	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	68
-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69
-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	70
6	-	*10*	-	*48*	*1*	*61*	*41*	*1*	*1*	*10*	-	*31*	*1*	-	*1*	-	-	*6*	*1*	-	-	71
1	-	*1*	-	*13*	*1*	*8*	*17*	*1*	*4*	*5*	-	*11*	*3*	*1*	*2*	-	-	-	-	-	-	72
9	-	-	-	*14*	-	*1*	*25*	-	*1*	*3*	-	*34*	-	-	-	-	-	*3*	-	-	-	73

dysentery, 6 cases in Boston, 7 cases and 1 death in Haverhill, and 1 case in New Bedford; 4 cases of 1 death in Cambridge, 1 death in Danvers, 1 case and 2 deaths at the Tewksbury State Infirmary, 1 in Lee; 10 cases of trachoma, 9 in Boston and 1 in Natick; and 13 cases of trichinosis, 1 in Boston,

LABORATORY AIDS FOR DIAGNOSIS AND TREATMENT OF COMMUNICABLE DISEASES.

The State Department of Health maintains, as a part of its regular work, bacteriological and biological laboratories to aid in the control and prevention of communicable diseases. The facilities of these laboratories and certain supplies furnished by them are available to physicians for the free use of residents of the Commonwealth. Upon requisition these supplies are sent to local boards of health, from whom physicians may obtain them as required.

The following supplies are available: —

Diphtheria antitoxin, 3 sizes: 3,000, 1,500 and 750 units.
Antityphoid vaccine (3 ampoules in each set).
Smallpox vaccine.
Antimeningitis serum.
Antirabic treatment (secured by special arrangement in each case through District Health Officers).
Outfits for diphtheria cultures.
Outfits for Widal tests (typhoid fever).
Outfits for bile tests (typhoid fever).
Schick tests for determining diphtheria immunity (material on application to District Health Officers).
Outfits for prevention of ophthalmia (silver nitrate in wax ampoules).
Outfits for sputum.

The following examinations are made for diagnosis at the laboratories, the specimens being sent to the laboratories by the physicians in attendance: —

At Bacteriological Laboratory, Room 527, State House: —

Bile culture test for typhoid, blood (of value only in first five days).
Widal test for typhoid, blood (rarely positive before fifth day).
Bile culture test for typhoid, stools, urine (probable carrier cases chiefly).
Sputum for tubercle bacilli (consumption).
Pus smears for gonococci.
Blood smears for malaria.
Throat and nose cultures for diphtheria.

At Wassermann Laboratory, Harvard Medical School, Longwood Avenue, Boston, Wassermann test for syphilis: —

Specimens are received in Wassermann Laboratory when submitted by direction of the District Health Officers or local boards of health. Patients are also bled at the laboratory on Tuesdays and Thursdays from 3 to 5 P.M. There is no charge for this class of work.

In addition to the above work examinations are made for rabies, glanders and anthrax for the Department of Animal Industry. Specimens to receive attention must be submitted through direction of the Department of Animal Industry.

NEW APPOINTMENTS.

Dr. Stanley H. Osborn of North Adams, former State District Health Officer of the Berkshire District, has been appointed to the position of Epidemiologist to the State Department of Health, his appointment taking effect on Jan. 15, 1917.

Dr. Howard A. Streeter of Marblehead has been appointed to the position of State District Health Officer of the Berkshire District, his appointment also taking effect on Jan. 15, 1917.

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

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Division of Hygiene, ...	Director, Lyman A. Jones, M.D.

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The Eastern District, ...	Merrill E. Champion, M.D., Wollaston.
The Northeastern District, . . .	Arthur A. Brown, M.D., Swampscott.
The North Midland District, . . .	Charles E. Simpson, M.D., Lowell.
The South Midland District, . . .	William W. Walcott, M.D., Natick.
The Wachusett District, ...	Francis A. Finnegan, M.D., Fitchburg.
The Connecticut Valley District, . .	John S. Hitchcock, M.D., Northampton.
The Berkshire District, ...	Howard A. Streeter, M.D., North Adams.

PUBLIC HEALTH BULLETIN

ISSUED MONTHLY

BY THE

STATE DEPARTMENT OF HEALTH

OF MASSACHUSETTS

FEBRUARY, 1917

Vol. 4, No. 2

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass., under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

REPORT OF PROGRESS UPON WORK UNDER CHAPTER 47, RESOLVES OF 1916, AUTHORIZING THE STATE DEPARTMENT OF HEALTH TO PROVIDE FOR THE PREVENTION AND SUPPRESSION OF SYPHILIS.

Of ancient origin, at times assuming the proportions of a scourge, manifesting itself in various stages in numerous destructive ways, syphilis still continues its ravages, entailing an unknown amount of sickness and suffering, and through inherited syphilis and other chance infections involving the innocent along with those who have been more directly exposed to its infection. While all physicians and health workers appreciate the great importance of this disease as a public health problem, because it is a social and secret disease, little attempt has hitherto been made to control it.

At the present time there is no means of knowing definitely how extensively the disease prevails. Death returns do not help, for very few deaths are recorded as due to syphilis, and it is well established that many deaths from this disease and its sequellæ are recorded under other names for obvious reasons. In States where the report of the disease is required by number, the reports are very far from complete.

It is definitely established, however, that approximately 10 per cent., probably many more, of the inmates of the State insane hospitals are insane because of syphilis. On this basis there are about 1,700 syphilitics continuously under the care of the State insane hospitals.

Such studies as are available indicate that about 5 per cent. of syphilitics develop general paralysis of the insane. In 1914, 258 such patients were admitted to the State insane hospitals. Accordingly, that represents 5,160 syphilitics.

There is reason to believe that possibly this disease is responsible for one-quarter of all stillbirths. In 1914 there were 3,478 stillbirths in Massachusetts. That means that 869 infants were born dead from the effects of this infection which involved a like number of mothers, and that many of the fathers, probably most of them, were also similarly infected.

Since the establishment of the Wassermann Laboratory by the State Department of Health in June, 1915, some 37,000 tests have been made, affording a fair sampling of the population as a whole. Five per cent. of these tests have been positive. This represents at least 850 syphilitics. If this sampling is representative of the population of the State, many thousands of cases of this disease are constantly present among the inhabitants. Many students of the subject consider this rate too low.

As a cause of suffering, sickness and death syphilis undoubtedly ranks next to lobar pneumonia and tuberculosis, the two latter being responsible for about 6,000 and 4,000 deaths annually, respectively.

In any event it is evident that this disease constitutes an exceedingly important health problem. Because the reporting of such cases is notoriously incomplete in States where it has been attempted, and of doubtful value at the present time, syphilis has not yet been placed on the list of diseases to be reported.

The diagnosis of this infection in its acute stages is, as a rule, comparatively easy, but in the later stages, when the patient frequently becomes a chronic carrier, one of the greatest difficulties in the control of this disease, from a public health standpoint, is the lack of ready means for determining its presence; and a further great difficulty is the problem of obtaining a trustworthy and effective remedy for the treatment of the disease.

To aid in meeting the first of these difficulties the State Department of Health, as already indicated, has established a Wassermann Laboratory for furnishing free diagnosis. For some time specimens have been examined at the rate of 25,000 annually.

To meet the second great difficulty, — the problem of obtaining an effective and trustworthy remedy for its treatment, — the State Department of Health has devoted much time and effort. The necessity for this undertaking was recognized by the Legislature when it appropriated funds for this purpose in 1915, since the present war and consequent interference with trade had rendered specific remedies manufactured abroad practically unobtainable.

After much difficulty the Department has finally succeeded in producing a specific remedy — an organic derivative of arsenic — which tests have shown to be less toxic than other preparations for the same purpose.

The next step is to provide for the manufacture of the remedy on a commercial scale sufficient to supply the demands for the citizens of the Commonwealth. The Department hopes, later in the year, to announce its readiness to supply the remedy on such a scale.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of January, 1917, samples were collected in 30 cities and towns.

There were 341 samples of milk examined, of which 79 were below the legal standard; 10 samples contained added water. There were 217 samples of food examined, of which the following were adulterated: 42 samples of eggs which were either decomposed, old or were cold-storage eggs sold as fresh eggs; 20 samples of scallops containing added water; 8 samples of sausages containing starch in excess of 2 per cent.; 5 samples of Hamburg steak containing sulphites and not so labeled; and 2 samples of renovated butter sold as pure butter.

There were 107 samples of drugs examined, of which 13 were adulterated. These consisted of spirit of nitrous ether, tincture of iodine, spirit of peppermint, spirit of camphor, and quinine pills, somewhat deficient in the active ingredient.

There were 24 convictions obtained for violation of the law, $335 in fines being imposed. Antone Enos of Acushnet was convicted for violation of the milk laws. The Freedman-Stahl Baking Company, Harry Freedman and Louis Cohan of Boston, Lucas Ossolinski, John Perroni, Joseph Roy and Jacob Winer of Salem, James Shaw of Lowell, Meyer L. Marcus of Dorchester, Philip J. Gralton of Waltham, and Peter Provetzas of Natick were convicted for violation of the food laws. The Freedman-Stahl Baking Company and Messrs Freedman, Roy, Winer and Marcus appealed their cases. John B. Jackson, Manuel Papose, Antone G. Pinto, Thaddeus Tomasik and Manuel Vargas of New Bedford, Joseph B. V. Coburn, George F. Conway, Joseph H. Flynn, Thomas A. McCann, Samuel H. Rostler, Gregory S. Skelly and Ambrose Vigeant of Lowell were convicted for violation of the cold-storage laws.

There were 16 confiscations made, of which 5 were of articles in cold storage. These consisted of 52 pounds of decomposed fowl, 21 pounds of decomposed squab, 9 pounds of decomposed turkey and 1,508 pounds of soiled and dried fish. The other 11 confiscations consisted of 20 pounds of tuberculous pigs' heads, 240 pounds of pork (pneumonia), 17 pounds of pork (hog cholera), 36 pounds of immature veal, 50 pounds of decomposed beef, 175 pounds of tainted boned beef, 143 pounds of decomposed beef trimmings, 50 pounds of decomposed lamb, 10¼ pounds of tainted chickens, and 6¾ pounds of tainted turkeys.

In addition to the above confiscations, 5 seizures were made by the United States marshal, upon information submitted by this Department, of scallops shipped to Boston from North Carolina. These consisted of 337 gallons, valued at $2 per gallon. In one instance the owner of the scallops had put up a bond and shipped them to Canada.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

Eight samples of milk containing added water, produced by John W. Keenan, Waltham; 1 sample of decomposed beef, from Kuechler Brothers, New Bedford; 2 samples of scallops containing added water, from the Jackson Fish Company, Boston; 1 sample of scallops containing added water, from R. E. McKenney, Boston; 4 samples of scallops containing added water, from A. H. G. Mears, Wachapreague, Va.; 1 sample of scallops containing added water, from Danch & Hardy, Boston; 2 samples of scallops containing added water, from R. W. Rogers, Dennis; 1 sample of scallops containing added water, from M. F. Foley & Co., Boston; 3 samples of scallops containing added water, from the Morehead City Sea Food Company, Inc., Morehead City, N. C.; and 1 sample of scallops containing added water, from C. E. Eldredge, Chatham.

QUARTERLY REPORT ON COLD STORAGE.

According to the law the various cold-storage warehouses in the State have to file with the State Department of Health, on or before January 25, their reports for the months of October, November and December.

The compilation of the figures shows that there were placed in cold storage during this period 1,445,124 dozens of eggs, 440,071 pounds of broken-out eggs, 4,203,239 pounds of butter, 12,707,701 pounds of poultry, 47,977 pounds of game, 14,546,360 pounds of meat, and 7,379,174 pounds of fish.

Compared with the figures submitted for the same months during 1915, there was an increase in storage of eggs amounting to 1,047,534 dozens, of butter amounting to 2,252,772 pounds, of poultry amounting to 5,228,370 pounds, and of fish amounting to 903,338 pounds. There was a decrease in the storage of game amounting to 331,464 pounds, and of meat amounting to 1,238,090 pounds. The total figures for both years indicate an increase in storage during 1916 amounting to about 8,000,000 pounds.

This increase is due largely to the fact that there was a large increase in the storage of poultry around Thanksgiving time, due, no doubt, to the high price of poultry and the resulting loss of market. This poultry can be sold to the summer hotels at a greater price than could have been obtained during the holiday season. The spring storage of many articles was much less in 1916 than during 1915. This has resulted in a shortage of the food usually consumed at the present season of the year, and, consequently, an increase in shipments from the west. This statement is borne out by the egg statistics, for, notwithstanding that storage during the past quarter was 1,000,000 dozens more than in 1915, the amount of eggs on hand on Jan. 1, 1917, was 13,000,000 dozens less than the amount on hand on Jan. 1, 1916. The amount of butter on hand Jan. 1, 1917, was 666,556 pounds more than the amount on hand Jan. 1, 1916. The total amount of eggs on hand Jan. 1, 1917, was 2,785,207 dozens, and the total amount of butter on hand was 12,621,368 pounds.

Quarterly Report on Slaughtering.

A compilation of the quarterly reports on slaughtering for the quarter ending January 1 shows that during this period 69,239 animals were inspected by local inspectors of slaughtering. Of this number, 10,217 were cattle, 18,808 were calves, 38,512 were hogs, 1,700 were sheep and 2 were goats. Of the total number inspected, 724 were condemned. Of this number, 183 were cattle, 365 were calves, 146 were hogs and 30 were sheep.

There were 313 calves condemned on account of immaturity; 210 animals on account of tuberculosis, of which 162 were cattle, 5 were calves and 43 were hogs; 24 animals on account of pneumonia, of which 3 were cattle and 21 were hogs; 57 hogs on account of hog cholera; 26 sheep on account of nodular disease; 7 hogs on account of urticaria; 32 animals on account of emaciation or weak condition, of which 1 was a cow, 25 were calves, 4 were hogs, and 2 were sheep; 12 animals on account of being bruised or injured, of which 2 were cattle and 10 were calves; 8 animals were condemned because they died otherwise than by slaughter, of which 3 were cattle and 5 were calves. The remaining 35 animals were condemned on account of intestinal obstruction, enteritis, hepatitis, jaundice, diarrhœa, abscesses, tumors, carcinoma, septicæmia, pyæmia, mastitis, rheumatism, pericarditis, fever, advanced pregnancy, metritis, poisoning, strangulation, stillborn or decomposition.

DEATHS IN MASSACHUSETTS FROM PNEUMONIA, BRONCHO-PNEUMONIA, BRONCHITIS AND INFLUENZA, 1912 TO 1914, INCLUSIVE.

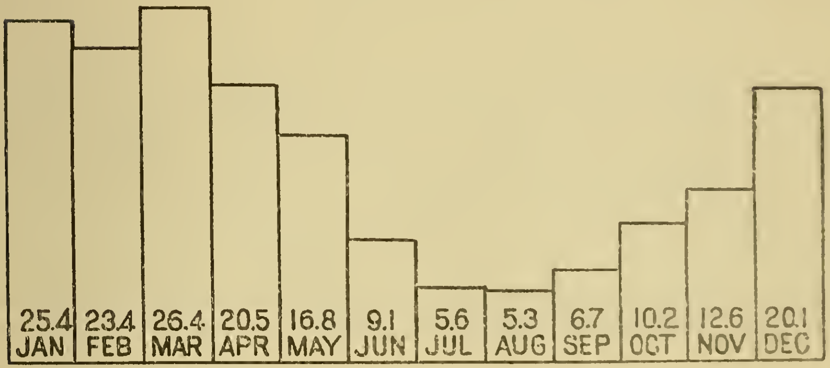
IN a weekly bulletin of the New York City department of health there recently appeared a cut illustrating, by months, the distribution of deaths due to certain acute respiratory diseases, — pneumonia, broncho-pneumonia, bronchitis and influenza.

A similar tabulation of deaths from these diseases in Massachusetts for a period of three years, 1912 to 1914, inclusive, is given on the opposite page. The similarity between the two diagrams is very close and exceedingly striking.

The value of fresh air in the treatment of tuberculosis is well known. Many cases of pneumonia have done well in fresh air. It is known that open-air schools have done much, both in body and mind, for children physically below par, and who, in consequence, were mentally backward. The suggestion is strong that it is probably more than a mere coincidence that the death rate from the diseases mentioned above is so much greater per 100,000 of population during the season of tightly closed houses, with artificial heat, than during the warmer months when we live more in the open.

Whatever significance may be attached to the diagram, it illustrates the great importance of efforts to avoid contracting these diseases, the urgent advisability of careful attention to colds, the desirability of clothing which will properly protect the person, and the benefit of fresh air at all times.

THE COMMONWEALTH OF MASSACHUSETTS
STATE DEPARTMENT OF HEALTH
DIAGRAM SHOWING
DEATH RATE PER 100,000 POPULATION
FROM
PNEUMONIA-BRONCHOPNEUMONIA-BRONCHITIS &
INFLUENZA
AVERAGE OF 3 YEARS 1912 TO 1914.



THIS DIAGRAM SHOWS THE MARKED INCREASE IN NUMBER OF DEATHS FROM THESE DISEASES DURING THE MONTHS WHEN WINDOWS ARE CLOSED AND PEOPLE SPEND LESS TIME IN THE OPEN AIR. THE DECREASE IN NUMBER OF DEATHS IS RAPID FROM MARCH WHEN THE HIGHEST RATE PREVAILS TO AUGUST WHEN WINDOWS ARE GENERALLY OPENED WIDELY AND MUCH TIME IS SPENT OUT OF DOORS, TO INCREASE RAPIDLY AGAIN WITH THE ONSET OF COLD WEATHER AND CLOSED HOUSES.

RÉSUMÉ OF THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE YEAR 1916.

During the year ended Nov. 30, 1916, over 22,000 specimens were examined in the Diagnostic Laboratory of the State Department of Health. This number represents an increase of 25 per cent. over that of the year 1915, and an approximate increase of 85 per cent. in two years. The average number of specimens examined per day has been 60, and the cost per examination 26 cents. The examinations made were for diphtheria, tubercle and typhoid bacilli, malarial parasites, gonococci and meningococci, and various miscellaneous examinations.

In addition to the Widal test for typhoid fever, of which more than 2,000 tests were made, over 300 specimens of feces, urine and blood from sick persons, typhoid convalescents and suspected carriers were examined for the presence of the typhoid bacillus. This work has been of greatest value in detecting chronic typhoid carriers, of which eight have been found during the year. Seven of these persons have been engaged in the handling of food, four as milk dealers, one as market gardener and two as waitresses. Seven were fecal carriers and one urinary. The majority of these persons had typhoid fever several years ago, but two or three deny any knowledge of an attack of the disease. The advisability of health officers keeping track of the whereabouts of these chronic carriers is apparent.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF JANUARY, 1917.

The following gives the total number of bacteriolcgical examinations made in the laboratory of the State Department of Health during the month of January, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, . . .	1,281	118	826	104	233

	Number of Examinations.	Positive.	Negative.
Tuberculosis,	332	59	273
Typhoid fever (Widal test),	88	14	74
Typhoid fever (culture test),	12	2	10
Malaria,	10	–	10
Miscellaneous,	117		

Total number of examinations made, 1,840.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR JANUARY, 1917.

General Discussion.

There has been a marked decrease in the total number of cases of communicable disease for the month of January as compared with the corresponding month for 1916. This decrease from 7,645 to 6,464 cases is confined chiefly to scarlet fever and whooping cough.

The cases for January, 1917, however, disclose an increase of 1,760 over those reported during December, 1916. For the corresponding months last year the increase was 2,224 cases. This increase in communicable diseases resembles last year's in that the diseases affected are measles, diphtheria, tuberculosis, whooping cough and scarlet fever, the same as in 1916.

Anterior Poliomyelitis. — This disease has returned to the status which it had previous to last year's epidemic. The 14 cases reported during the month were distributed among 11 communities, as follows: Boston, 5, Abington, Easton, Haverhill, Lawrence, North Andover, Rockport, Shelburne, Somerville and Springfield, 1 each.

Anthrax. — A case of anthrax was reported from North Adams. This case developed soon after handling the same lot of hides that caused the infection in the case in that city in December. Anthrax serum obtained from the Bureau of Animal Industry of the United States Department of Agriculture was given, and the patient recovered.

Smallpox. — The case of smallpox reported from Lee shows evidence and the circumstances under which it occurred strongly suggests the probability that it is connected with the November, 1916, outbreak, through missed or unrecognized cases.

EPIDEMICS AND OUTBREAKS.

The month was noticeable for the small number of serious outbreaks of communicable diseases.

Measles. — A total of 1,886 cases of measles reported for the month, as compared with 1,054 cases for December, 1916, was largely responsible for the increase in this month's communicable disease.

In Fall River measles continued to increase, a total of 293 cases being reported for the month, which was 53 more than the total number of cases for December. Investigation showed that in many communities no physician is called and the children are found to be attending school in the first stages of the disease, in this way spreading it among other children.

In general, due to the fact that medical aid is not called, outbreaks of this disease acquire a start which is not easily overcome. Investigation by the State District Health Officers of outbreaks invariably discloses many cases which have not had medical attendance. In most instances these cases equal the number of cases in which a doctor has been called.

Whooping Cough. — A better reporting of whooping cough is desirable, because of the high mortality as compared with other so-called minor diseases. Work along this line in Swampscott uncovered 58 cases in January. It would seem that similar investigation in other municipalities would undoubtedly show like results. Medical inspection of the schools at the onset of an outbreak would then be of more value than after the school is well seeded with this disease.

Scarlet Fever. — Several small outbreaks of this disease occurred, which were handled by the local boards of health in their respective localities. The mildness of the disease produces a number of unrecognized cases and the outbreak persists, *e.g.*, one outbreak of 10 cases was traced to such an unrecognized case imported from another State.

Diphtheria. — The outbreak in Webster continued during the early part of January until the taking of release cultures at the end of the illness and also of the contacts produced a marked diminution in the number of cases reported.

In Gardner the taking of release cultures from families where a case existed disclosed a number of carriers of this disease, which made up the majority of cases reported from Gardner during the month. A school drinking faucet, with which the mouths of the children came in direct contact, seems to have been the contributing factor in the spread of the outbreak in the beginning.

A better control of outbreaks in schools at the beginning, by taking cultures, immunizing contacts with antitoxin, and insisting upon release cultures, has kept the cases down to a low number. The use of the Schick test in locating susceptible individuals in outbreaks is to be encouraged, as it furnishes a definite foundation on which to base the immunizing doses.

RARE DISEASES.

Anthrax. — One case was reported from North Adams.

Cerebrospinal Meningitis. — There were 4 cases reported from Boston, and from Lowell, Milford, New Bedford, Northampton, Springfield, Ware and Worcester, 1 case each.

Dysentery. — One case was reported from Fall River.

Dog-bite. — Two cases were reported from Lowell, and from Brockton and Falmouth, 1 case each.

Glanders. — One case was reported from Springfield.

Malaria. — One case was reported from Boston.

Septic Sore Throat. — Boston reported 15 cases; Cambridge, Chicopee, Newburyport, Northampton and Springfield, 1 case each.

Smallpox. — One case each was reported from Lee and Worcester.

Tetanus. — One case each was reported from New Bedford and Pittsfield.

Trachoma. — Three cases were reported from Boston, and from Lawrence, Lowell and New Bedford, 1 case each.

DISTRIBUTION.

All Communicable Diseases.

	December, 1916.	January, 1917.	January, 1916.
Total cases,	4,704	6,464	7,645
Case rate per 100,000 population,	124.5	171.0	202.0

Common Diseases.

	December, 1916.	January, 1917.	January, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[1]
Diphtheria: —				Cambridge, (33) 76 Canton, (0) 31 Billerica, (0) 7 Webster, (1) 20 Gardner, (1) 41 Springfield, (12) 35
Total cases,	775	869	861	
Case rate per 100,000 population,	20.6	23.0	22.8	
Measles: —				Fall River, (10) 293 New Bedford, (14) 94 Cambridge, (22) 48 Hingham, (0) 48 Ipswich, (2) 22 Melrose, (24) 55 Merrimac, (0) 17 Rowley, (0) 22 Lexington, (0) 53 Lowell, (35) 132 Medford, (14) 60 Newton, (7) 72 Ayer, (0) 31 Princeton, (1) 26 Deerfield, (0) 23
Total cases,	1,054	1,886	1,858	
Case rate per 100,000 population,	28.0	50.0	49.0	
Scarlet fever: —				Westford, (0) 7 Wellesley, (2) 12 Erving, (1) 9 Greenfield, (1) 14
Total cases,	578	675	982	
Case rate per 100,000 population,	15.3	17.9	26.0	
Typhoid fever: —				
Total cases,	79	71	81	
Case rate per 100,000 population,	2.1	1.9	2.1	
Whooping cough: —				Swampscott, (0) 58
Total cases,	170	273	967	
Case rate per 100,000 population,	4.5	7.2	25.6	
Tuberculosis, pulmonary: —				
Total cases,	678	722	669	
Case rate per 100,000 population,	17.9	19.1	17.7	
Tuberculosis, other forms: —				
Total cases,	43	63	49	
Case rate per 100,000 population,	1.1	1.7	1.3	

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	Occupation.	Locality.	Sex.	Age.	Color.
Anthrax,	Tanner,	North Adams,	M	24	W
Brass poisoning,	Foundry,	Boston,	M	34	W
Brass poisoning (15),	Welders,	West Springfield,	M	19 to 46	W
Lead poisoning,	Ship builder,	Quincy,	M	28	W
Lead poisoning,	Plumber,	Quincy,	M	34	W
Lead poisoning,	Plumber,	Boston,	M	38	W
Lead poisoning,	Compositor,	Boston,	M	23	W
Lead poisoning,	Wire worker,	Boston,	M	52	W
Lead poisoning (7),	Painters,	Boston,	M	22 to 56	W
Lead poisoning (2),	Painters,	Brookline,	M	42 and 46	W
Lead poisoning (2),	Painters,	Concord,	M	29 and 57	W
Lead poisoning (2),	Painters,	Medford,	M	42 and 46	W
Lead poisoning,	Painter,	Everett,	M	40	W
Lead poisoning,	Painter,	Cambridge,	M	47	W
Lead poisoning (2),	Rubber workers,	Watertown,	M	39 and 43	W
Lead poisoning,	Molder,	Newton,	M	31	W
Lead poisoning,	Dry compound sifter,	Newton,	M	34	W
Lead poisoning,	Press worker,	Chelsea,	M	33	W
Lead poisoning,	Gas fitter,	Lawrence,	M	23	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1916.	Total Deaths from All Causes.	63A		19A		9		19B		6	
				Anterior Poliomyelitis.		Chicken Pox.		Diphtheria.		German Measles.		Measles.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,779,033	4,960	36	10	626	–	775	66	23	–	1,054	21
2	Cities over 200,000.												
3	Boston,	763,529	1,045	6	4	177	–	179	16	3	–	86	–
4	Cities, 150,000-200,000.												
5	Worcester,	166,735	222	–	–	11	–	28	3	1	–	36	5
6	Cities, 100,000-150,000.	*563,343*	*833*	*6*	–	*53*	–	*118*	*10*	*7*	–	*390*	*7*
7	Fall River,	126,119	169	–	–	7	–	7	1	–	–	240	3
8	New Bedford,	112,689	148	–	–	12	–	12	1	4	–	16	–
9	Cambridge,	109,785	143	6	–	17	–	51	3	2	–	25	–
10	Lowell,	108,385	189	–	–	8	–	28	4	1	–	109	4
11	Springfield,	106,365	184	–	–	9	–	20	1	–	–	–	–
12	Cities, 50,000-100,000.	*453,749*	*572*	*5*	*1*	*110*	–	*102*	*12*	*4*	–	*17*	–
13	Lynn,	97,366	111	2	1	38	–	24	3	–	–	6	–
14	Lawrence,	91,314	115	–	–	25	–	17	2	–	–	3	–
15	Somerville,	89,178	98	1	–	15	–	20	3	–	–	5	–
16	Brockton,	63,590	82	–	–	27	–	12	1	2	–	–	–
17	Holyoke,	61,562	109	2	–	–	–	21	1	2	–	1	–
18	Haverhill,	50,739	57	–	–	5	–	8	2	–	–	2	–
19	Cities and Towns, 25,000-50,000	*534,149*	*614*	*10*	–	*76*	–	*101*	*8*	*3*	–	*94*	–
20	Malden,	49,996	50	–	–	4	–	13	1	–	–	33	–
21	Chelsea,	46,078	56	–	–	11	–	6	–	–	–	5	–
22	Newton,	43,912	43	1	–	1	–	1	–	–	–	1	–
23	Quincy,	42,615	41	2	–	1	–	12	1	–	–	1	–
24	Pittsfield,	41,416	45	1	–	3	–	4	1	–	–	–	–
25	Fitchburg,	40,098	54	–	–	14	–	14	1	–	–	10	–
26	Everett,	38,741	37	1	–	13	–	16	–	–	–	2	–
27	Salem,	38,662	61	1	–	10	–	1	–	–	–	1	–
28	Taunton,	36,621	57	–	–	5	–	3	–	–	–	1	–
29	Brookline,	34,867	38	2	–	3	–	4	–	–	–	2	–
30	Medford,	32,286	38	1	–	6	–	1	–	–	–	36	–
31	Chicopee,	31,283	40	–	–	–	–	12	3	3	–	2	–
32	Waltham,	30,715	37	1	–	5	–	6	1	–	–	–	–
33	Revere,	26,859	17	–	–	–	–	8	–	–	–	–	–
34	Cities and Towns, 10,000-25,000.	*547,500*	*686*	*5*	*2*	*117*	–	*161*	*11*	*2*	–	*208*	*4*
35	Gloucester,	24,497	25	1	1	1	–	3	–	–	–	–	–
36	Beverly,	24,001	36	1	–	6	–	3	–	–	–	2	–
37	Northampton,	22,191	52	–	1	3	–	1	–	–	–	3	3
38	North Adams,	22,039	22	1	–	5	–	–	–	–	–	1	–
39	Peabody,	19,327	28	–	–	6	–	1	–	–	–	2	–
40	Attleboro,	19,027	18	1	–	–	–	1	–	–	–	1	–
41	Westfield,	18,983	31	–	–	–	–	5	1	–	–	–	–
42	Leominster,	17,662	24	–	–	14	–	7	1	–	–	24	–
43	Watertown,	17,395	12	–	–	1	–	2	–	–	–	2	–
44	Melrose,	17,161	20	–	–	2	–	–	–	2	–	2	–
45	Gardner,	16,781	24	–	–	14	–	53	2	–	–	10	1
46	Woburn,	16,676	24	1	–	–	–	10	1	–	–	–	–
47	Framingham,	16,564	17	–	–	15	–	4	–	–	–	134	–
48	Arlington,	15,784	18	–	–	–	–	5	–	–	–	6	–
49	Marlborough,	15,412	18	–	–	3	–	1	–	–	–	1	–
50	Newburyport,	15,398	20	–	–	4	–	–	–	–	–	2	–
51	Methuen,	14,625	19	–	–	–	–	8	1	–	–	–	–

TO THE PUBLIC HEALTH, DECEMBER, 1916.

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		14 Dysentery.		100 Septic Sore Throat		75A Trachoma		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases	Deaths	Line No.
450	–	135	–	578	8	678	387	43	54	79	18	170	15	9	9	7	3	14	–	11	–	1
																						2
127	–	48	–	80	3	144	87	11	20	18	4	14	1	2	2	5	–	3	–	6	–	3
																						4
12	–	8	–	46	–	23	23	–	–	2	–	1	2	–	–	–	–	–	–	–	–	5
24	–	*23*	–	*78*	*2*	*169*	*62*	*12*	*11*	*21*	*4*	*24*	*2*	*2*	*2*	*1*	*1*	*1*	–	–	–	6
–	–	8	–	7	–	84	15	2	3	10	1	11	1	–	–	1	1	–	–	–	–	7
10	–	5	–	10	–	27	13	2	3	4	–	2	1	–	–	–	–	–	–	–	–	8
5	–	9	–	20	1	22	14	2	1	2	–	3	–	–	–	–	–	1	–	–	–	9
7	–	–	–	11	1	18	11	4	2	2	2	6	–	–	1	–	–	–	–	–	–	10
2	–	1	–	30	–	18	9	2	2	3	1	2	–	2	1	–	–	–	–	–	–	11
14	–	*16*	–	*50*	*1*	*60*	*43*	*5*	*5*	*12*	*3*	*22*	*2*	–	–	–	–	–	–	*1*	–	12
4	–	3	–	18	–	12	8	–	1	9	1	1	–	–	–	–	–	–	–	–	–	13
4	–	–	–	5	1	17	12	3	1	–	–	3	1	–	–	–	–	–	–	1	–	14
–	–	4	–	7	–	9	6	–	–	1	–	1	–	–	–	–	–	–	–	–	–	15
5	–	3	–	3	–	9	5	2	1	1	–	–	–	–	–	–	–	–	–	–	–	16
–	–	1	–	12	–	7	7	–	–	–	1	–	1	–	–	–	–	–	–	–	–	17
1	–	5	–	5	–	6	5	–	2	1	1	17	–	–	–	–	–	–	–	–	–	18
69	–	*18*	–	*71*	–	*141*	*38*	*7*	*6*	*8*	–	*35*	*2*	*2*	*3*	–	*1*	–	–	*2*	–	19
–	–	5	–	2	–	7	3	–	–	–	–	1	–	1	1	–	–	–	–	–	–	20
5	–	5	–	3	–	8	–	1	1	2	–	–	–	–	–	–	–	–	–	1	–	21
17	–	–	–	7	–	3	–	2	2	1	–	–	–	–	–	–	–	–	–	–	–	22
30	–	3	–	3	–	45	2	–	–	2	–	–	–	–	–	–	–	–	–	–	–	23
1	–	–	–	3	–	23	4	2	1	1	–	–	–	–	–	–	–	–	–	–	–	24
–	–	–	–	–	–	10	7	–	–	–	–	3	–	–	–	–	–	–	–	–	–	25
–	–	2	–	17	–	8	7	–	–	1	–	3	–	–	–	–	1	–	–	–	–	26
1	–	–	–	6	–	10	2	1	–	–	–	13	–	1	2	–	–	–	–	1	–	27
–	–	–	–	11	–	8	6	–	–	–	–	1	1	–	–	–	–	–	–	1	–	28
1	–	–	–	2	–	5	2	–	–	–	–	–	1	–	–	–	–	–	–	–	–	29
–	–	–	–	8	–	1	1	–	–	–	–	2	–	–	–	–	–	–	–	–	–	30
–	–	1	–	6	–	7	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	31
14	–	–	–	1	–	3	2	1	1	1	–	12	–	–	–	–	–	–	–	–	–	32
–	–	2	–	2	–	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	33
127	–	*7*	–	*124*	*2*	*61*	*39*	*4*	*5*	*8*	*4*	*19*	*3*	*2*	*2*	*1*	*1*	*1*	–	*1*	–	34
–	–	–	–	–	–	12	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	35
–	–	–	–	1	–	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	36
8	–	–	–	2	–	2	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	37
–	–	1	–	5	–	3	2	–	–	1	2	–	–	–	–	–	–	–	–	–	–	38
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	39
–	–	–	–	3	–	5	1	2	–	–	–	–	–	–	–	–	–	–	–	1	–	40
–	–	1	–	23	1	3	4	–	–	1	1	–	–	–	–	–	–	1	–	–	–	41
–	–	–	–	3	–	2	1	–	–	–	–	4	–	–	–	–	–	–	–	–	–	42
31	–	1	–	2	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	43
–	–	–	–	2	–	–	1	–	–	2	–	–	–	–	–	–	–	–	–	–	–	44
–	–	1	–	4	1	4	1	–	2	1	–	–	–	–	–	–	–	–	–	–	–	45
–	–	–	–	10	–	1	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	46
77	–	–	–	1	–	1	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	47
1	–	–	–	1	–	3	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	48
–	–	–	–	4	–	2	1	–	–	–	–	–	–	1	1	–	–	–	–	–	–	49
–	–	–	–	4	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	50
–	–	–	–	2	–	–	3	–	–	–	–	–	1	–	–	–	–	–	–	–	–	51

Cases and Deaths from Diseases Dangerous

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1916.	Total Deaths from All Causes.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,605	13	–	–	1	–	6	1	–	–	–	–
53	Weymouth,	14,229	18	–	–	–	–	–	–	–	–	–	–
54	Milford,	13,836	14	–	–	–	–	–	–	–	–	–	–
55	Winthrop,	13,393	9	–	–	1	–	1	–	–	–	3	–
56	Adams,	13.264	12	–	–	–	–	6	–	–	–	–	–
57	Clinton,	13.220	19	–	–	8	–	1	–	–	–	–	–
58	Greenfield,	13,152	20	–	–	10	–	–	–	–	–	1	–
59	Plymouth,	13,116	10	–	–	–	–	–	–	–	–	–	–
60	Wakefield,	13.114	13	–	–	–	–	1	–	–	–	–	–
61	Webster,	12,820	16	–	–	–	–	17	–	–	–	–	–
62	West Springfield,	11,850	14	–	–	1	–	6	3	–	–	–	–
63	Norwood,	11,693	13	–	–	1	–	7	–	–	–	–	–
64	Danvers,	11.601	39	–	–	1	–	–	–	–	–	–	–
65	Dedham,	11,468	10	–	–	–	–	–	–	–	–	2	–
66	Natick,	11.442	15	–	–	6	–	7	1	–	–	11	–
67	Saugus,	10.753	7	–	–	–	–	–	–	–	–	–	–
68	Winchester,	10,173	9	–	–	14	–	–	–	–	–	–	–
69	Easthampton,	10,164	8	–	–	–	–	5	–	–	–	1	–
70	Athol,	10,084	19	–	–	–	–	–	–	–	–	–	–
71	Towns, 5,000-10,000.	*355,069*	*487*	*1*	*2*	*43*	–	*49*	*2*	*1*	–	*94*	*1*
72	Towns, 2,500-5,000.	*185,118*	*230*	*1*	*1*	*25*	–	*15*	*1*	*2*	–	*74*	*1*
73	Towns under 2,500.	*209,342*	*271*	*2*	–	*16*	–	*22*	*3*	–	–	*55*	*3*

In addition to the above there occurred 2 cases of anthrax, 1 in North Adams and 1 in Winchester, and 3 cases of malaria, 2 in Newton and 1 in Springfield, and 1 death in Fall River; 2 cases of pellagra, 1 in 3 cases of tetanus, 1 in Boston, 1 in Concord and 1 in Natick, and 1 death in Natick.

TO THE PUBLIC HEALTH — *Concluded.*

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		14 Dysentery.		100 Septic Sore Throat.		75A Trachoma		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
-	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	52
-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53
-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	55
-	-	-	-	2	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	56
-	-	-	-	1	-	1	2	1	-	-	-	1	1	-	-	1	1	-	-	-	-	57
-	-	-	-	17	-	1	-	-	-	-	1	-	-	1	1	-	-	-	-	-	-	58
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-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
-	-	1	-	1	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
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2	-	2	-	8	-	4	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	63
-	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	64
-	-	-	-	5	-	-	-	-	1	-	-	2	-	-	-	-	-	-	-	-	-	65
7	-	-	-	10	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	66
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1	-	-	-	1	-	-	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	68
-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69
-	-	-	-	2	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	70
34	-	*12*	-	*71*	-	*67*	*55*	*2*	*5*	*7*	*2*	*48*	*1*	*1*	-	-	-	*9*	-	-	-	71
35	-	*2*	-	*22*	-	*5*	*18*	*2*	*1*	*2*	*1*	*2*	*2*	-	-	-	-	-	-	-	-	72
8	-	*1*	-	*36*	-	*8*	*22*	-	*1*	*1*	-	*5*	-	-	-	-	-	-	-	-	-	73

1 death in North Adams; 5 cases of dog-bite, 1 in Brockton, 1 in Chelsea, 2 in Lowell, and 1 in Needham; the Taunton Insane Hospital and 1 at the Tewksbury State Infirmary; 1 case of smallpox in Boston; and

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PUBLIC HEALTH BULLETIN

ISSUED MONTHLY
BY THE
STATE DEPARTMENT OF HEALTH
OF MASSACHUSETTS

MARCH, 1917

Vol. 4, No. 3

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass.,
under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

REPORT ON INVESTIGATION OF NON-PULMONARY TUBERCULOSIS, AS PROVIDED BY CHAPTER 62 OF THE RESOLVES OF 1916.

THE resolve calls for an investigation of the matter of non-pulmonary tuberculosis with special reference to children and adolescents throughout the Commonwealth. It directs the State Department of Health to determine so far as possible: —

First. — The present number of cases of non-pulmonary tuberculosis in the Commonwealth, and their situation.

Second. — The number of hospital beds now available for the care of such cases.

Third. — The number of additional hospital beds needed for the proper care and treatment of such cases, and the proper situation of such beds.

Fourth. — Whether such beds, if needed, should be supplied by additions to, or enlargements of, existing general or other hospitals, or by providing new institutions designed for the purpose of treating non-pulmonary tuberculosis cases exclusively.

Fifth. — How such additions to, or enlargements of, general or other hospitals, or such new institutions, if they are needed, should be financed and administered.

The subject of non-pulmonary tuberculosis is a very different one from that of pulmonary tuberculosis. The State Department of Health has placed pulmonary tuberculosis on the list of diseases to be reported, because, in their opinion, it is a communicable disease transmitted from person to person, causes the largest number of deaths of any one disease, and the person suffering therefrom is a danger to other persons around him and to the community in which he lives or travels unless proper precautions are taken. Non-pulmonary tuberculosis was placed on the reportable list that there might be figures at hand to show the ravages of the disease outside of the well-understood pulmonary form. The processes are usually slow and of comparatively little danger to other members of the family or to the community in which the patient lives.

In the pulmonary form, under which term tuberculosis of the entire respiratory tract should be included, hospitals are built and dispensaries are established, both for the care of the patient and the protection of the public. In the non-pulmonary form, whatever action is indicated by the terms of this resolve is practically for the treatment of the patient, in order that, so far as possible, the afflicted person may become a useful member of the community rather than a burden. It is seldom that there is any indication that these cases transmit the disease to others, as the bacilli are found in but very small numbers in the discharges from the lesions. They have become afflicted with the disease from having received the infective organisms into their system from some other source, probably through the digestive tract. Where the type of infection has been determined in these cases, a considerable number have been found to be bovine.

Non-pulmonary tuberculosis is found in various forms, but for convenience in discussing the needs of the cases it may be divided into the following groups, namely, meningeal, glandular, bones and joints, genito-urinary, visceral, skin.

The first, meningeal, is a very common form occurring mostly in young children. It runs an acute course, ends fatally, and no public provision for treatment and care seems necessary.

The second, glandular, is probably the most common form of all, although the reported cases and hospital records show a larger number of bone lesions.

A large proportion of the glandular cases lead useful lives, with little or no treatment outside of what they can obtain from their family physician. In one hospital in Boston, out of 6,503 patients admitted to the wards in 1915, 33 were admitted for treatment of enlarged glands. Of the cases recorded in the State Department of Health office, 27 per cent. belonged to this group. Patients in this group need good hygienic surroundings and good food with little other treatment. These cases could be treated in a hospital for truly incipient pulmonary cases, but ought not to be associated with open cases.

The third group, tuberculosis of the bones or joints, was found in 34 per cent. of the total cases reported. This is a group that needs both good hygienic surroundings and special treatment, if they are to have the best chance to become useful citizens; without it they are liable to become more or less crippled. Outside the largest centers, and to some extent there, the usual practice is to take these cases into a hospital and either operate on them and keep them in the hospital for an average of about three weeks, or put them in some special apparatus for a period of from three weeks to three months and then discharge them with more or less after-supervision.

The highest authorities state that these cases should have approximately two to three years to effect a permanent cure. The former course, however, is being taken in Massachusetts, partly because the cases are treated by the general surgeon, and partly because the hospitals are treating acute cases and do not wish to keep a patient in the wards the length of time these cases require. In recent years many of the private hospitals are providing special treatment for these cases.

The fourth group, genito-urinary tuberculosis, is found very largely in adult life. While it would in many cases be beneficial to have these cases under improved hygienic conditions for a longer period than can be expected in a general hospital, consideration of this class of cases is not called for in the resolve, as it refers to children and adolescents especially.

The fifth, visceral, may be considered with the preceding group.

The sixth group, skin tubercular cases, is not well reported and does not show up as it should even in hospital reports, but 40 cases being shown in a year in one hospital report, while the physician in charge of the department states he has 25 cases needing hospitalization now. Here, again, special treatment is required as well as good hygienic surroundings.

SCOPE OF INVESTIGATION.

In looking up data on non-pulmonary tuberculosis, we have communicated with 900 physicians, and received replies from only 108. Of these, 64 made the statement that they had treated no cases of non-pulmonary tuberculosis, while 44 reported they had treated cases and gave a list totalling 138. Of these 138 cases, 33 had been previously reported to their respective boards of health, and 105 had not been reported. Replies were also received from 14 hospitals in the State.

The State District Health Officers have been making systematic inspections of the hospitals in their respective districts this year, and have had in mind the various requirements of this resolve. From their investigations and observations, it has been possible to obtain much valuable information. A few hospitals outside the State have been visited, and the opinions of those who are doing work along the lines of this resolve have been consulted, as have those interested in tuberculosis of any form.

Although all forms of tuberculosis have been on the reportable list since 1907, it is an indisputable fact that non-pulmonary forms have been but poorly reported. This is clearly shown by the fact that only 822 cases of non-pulmonary tuberculosis were reported in 1915 in the State, 355 of these being in Boston, while the annual report of one of the Boston hospitals alone, for that year, showed a total of 678 cases treated.

In a comparatively small number of cases has it been practical to find the ages of the patients, but of those determined, 48 per cent. were children, 21 per cent. adolescents, and 31 per cent. adults.

Under the first determination of the resolve, — "the present number of cases of non-pulmonary tuberculosis in the Commonwealth, and their situation," — investigation has shown that the cases have been so poorly reported by the physicians generally and so seldom classified in their minds, that anything approaching accurate figures is impossible.

The figures obtained, however, show that the cases are fairly evenly distributed throughout the Commonwealth, 185 cities and towns having reported cases.

Under the second determination of the resolve, — "the number of hospital beds now available for the care of such cases," — investigation shows that the State sanatoria do not take such cases unless complicated with the pulmonary form. City institutions having tuberculosis hospitals seldom have beds kept exclusively for non-pulmonary cases, but frequently admit such cases with their other cases.

There are no private institutions having beds exclusively for non-pulmonary cases, but all admit them.

Under the third determination,— "the number of additional hospital beds needed for the proper care and treatment of such cases, and the proper situation of such beds," — as such cases are being treated at present, there is no waiting list, but certain institutional physicians claim they have been unable at times to place their patients where they would be under the most favorable conditions for recovery. Others claim they frequently have cases of this type complicated with the pulmonary form, for which they have neither adequate equipment nor specially trained staffs for their proper care and treatment. Additional beds in any place, without these requirements, would not benefit the cases specified in this resolve.

"The proper situation of such beds;" it is admitted by all authorities that fresh air, sunshine, rest, good food and proper hygienic conditions are necessary factors in restoring this type of patients as near as possible to normal conditions and efficiency.

The question of whether these cases do better at the seaside or at higher altitudes still has strong advocates on each side, and still seems far from being conclusively settled. Those doing special work in this type of cases in private and municipal hospitals in New York, New Jersey and Pennsylvania generally advocate the seaside.

We believe that situation in the mountains or at the seashore is a consideration secondary to that of adequate equipment and specially trained staffs above mentioned, and that these cases will do well in either place if they are supplied with the above requirements.

Under the fourth determination, — "whether such additional beds, if needed, should be supplied by additions to, or enlargements of, existing general or other hospitals, or by providing new institutions designed for the purpose of treating non-pulmonary cases exclusively," — it is our opinion that, for the present at least, it would be best to provide the needed beds at existing institutions which are already equipped and doing excellent work along these lines, but are not run exclusively for non-pulmonary tuberculosis. We refer to the Massachusetts Hospital School for the care and education of crippled and deformed children at Canton, and, if they cannot care for all, the corporation of Hospital Cottages for Children at Baldwinsville.

The former is a State institution, built for 300 beds. In 1915 it had an average of 262 patients, about one-third of whom were cases of tubercular bone lesions.

The institution at Baldwinsville is supported by private funds, but has five trustees appointed by the Governor and Council.

At present it does not seem necessary to provide new institutions for the purpose of treating the type of cases referred to in the resolve.

Under the fifth determination, — "how such additions to, or enlargements of, general or other hospitals, or such new institutions, if they are needed, should be financed and administered."

In the event of the utilization of the institutions above-named, it would not be necessary to further amend chapter 446, Acts of 1904, as amended by chapter 226, Acts of 1907, or chapter 497, Acts of 1909, or any other acts, if any, applicable thereto, in order that the necessary additions to or enlargements of the same may be made, and their scope broadened or extended so as to provide for the needs, care and treatment of the type of cases under consideration in this resolve. At the Hospital Cottages for Children at Baldwinsville a fixed charity rate already exists for cases supported by the State, or any city or town within the Commonwealth.

The financing and administration of such institutions would be an easily solved problem. The Hospital School at Canton is a State institution. No special legislation would be required except the additional necessary appropriation.

The corporation of the Hospital Cottages for Children at Baldwinsville, in the event of its being necessary to increase the bed capacity of the institution, might require some further agreement.

CONCLUSIONS.

1. The actual need for special institutions for the treatment of cases of non-pulmonary tuberculosis is not at present recognized by the majority of the medical profession.

2. General use has not been made of the already available beds in existing institutions.

3. Within the next two years, the number of available beds for pulmonary tuberculosis cases will be increased by over 900 beds, when the cities of over 50,000 population carry out their contemplated plans, and the county commissioners discharge the duties imposed upon them by the Legislature of 1916. The completion of these hospitals should give the opportunity so much needed for the segregation of different classes of tuberculosis cases in the various private, municipal and State sanatoria, which segregation may have some bearing on this subject.

4. The Hospital School at Canton, and, to a limited extent, the Hospital Cottages at Baldwinsville are already organized, equipped, and at work with good results along lines most needed by the non-pulmonary tuberculosis cases. By extending their work the present needs for the care of non-pulmonary cases can be met.

5. Until such time as the whole work for tuberculosis cases in general has adjusted itself to the increased facilities that the next two years will furnish, it would not be advisable to consider the building and organizing of any new institution for the non-pulmonary tuberculosis cases.

RECOMMENDATIONS.

Such amounts as it may be deemed wise to appropriate for the proper care and treatment of non-pulmonary cases of tuberculosis should be disbursed through the trustees of the Massachusetts Hospital School and the State Board of Charity, because the subject is one for the care and treatment of children already diseased rather than for the prevention of disease.

PROPOSED LEGISLATION.

Only such legislation as may be necessary to authorize the trustees of the Massachusetts Hospital School to change their rules and regulations so as to properly care for and treat children and adolescents suffering from non-pulmonary forms of tuberculosis should be proposed.

PREVENTION OF FLIES.

THE Farmers' Bulletin, No. 679, published by the Bureau of Entomology, L. O. Howard, chief, July 14, 1915, contained the following description of a maggot trap for destruction of fly larvæ from horse manure: —

MAGGOT TRAP FOR DESTRUCTION OF FLY LARVÆ FROM HORSE MANURE.

The following method of handling manure is one which does not require the application of chemicals. It is based on the fact that the larvæ of the house fly, when about ready to pupate, show a very strong tendency to migrate. They leave the spot where they have been feeding and crawl about in search of a suitable place for pupation. This migration takes place mostly at night, and the larvæ sometimes crawl considerable distances away from the manure pile. Now it is possible by means of a very simple arrangement called a maggot trap to destroy fully 99 per cent. of all maggots breeding in a given lot of manure. A successful maggot trap which the Maryland Agricultural College constructed at the college barn last year is shown in Fig. 1. The trap was designed by the

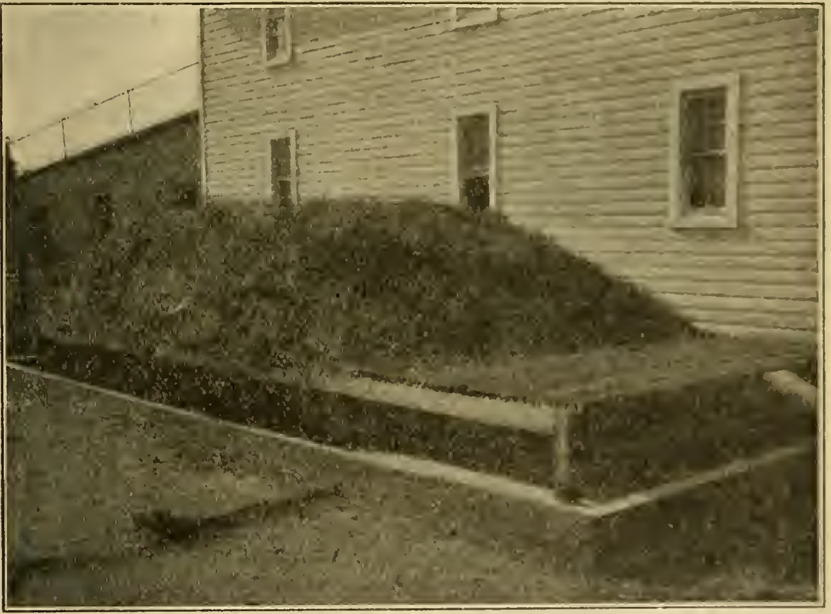


FIG. 1. — A maggot trap for house-fly control. View of the maggot trap, showing the concrete basin containing water in which larvæ are drowned, and the wooden platform on which manure is heaped. (From Hutchison.)

junior author and constructed under his supervision. The manure, instead of being thrown on the ground, is heaped carefully on a slatted platform, which stands about 1 foot high. This particular platform measures 10 by 20 feet. There are six 2 by 4 pieces running lengthwise 2 feet apart. Across these are nailed 1-inch strips with one-half to 1 inch spaces between them. The wooden platform stands on a concrete floor, and a rim or wall of concrete 4 inches high surrounds the floor. The floor slopes a little toward one corner, from which a pipe leads to a small cistern near by. This pipe is plugged with a stopper of soft wood, and the concrete floor is filled with water to a depth of 1 inch in the shallowest part. The manure is then heaped on the platform each morning when it is removed from the stable. Flies will lay their eggs on the manure as usual, but the maggots, when they have finished feeding and begin to migrate, crawl out of the manure, drop into the water below, and are drowned. Each week the plug is removed from the pipe, and all the maggots are washed into the cistern. The floor is then cleaned of any solid particles by means of a long-handled stable broom or by a strong stream of water from a hose. The pipe being again plugged, the floor is again partly filled with water and the trap is ready for another week's catch. A platform of this size will hold the manure accumulating from four horses during the period of four months, or about twenty days' accumulation from 25 horses, if the heap is well built and made at least 5 feet high.

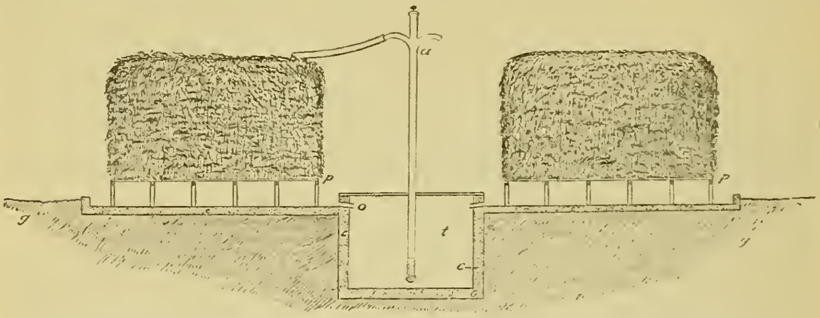


Fig. 2. — Imaginary cross section of an arrangement suggested for use where manure production is large. *a*, Pump; *c*, concrete floor and walls of cistern; *o*, outlet pipes leading from floor of maggot trap to cistern; *p*, platform maggot trap; *t*, cistern for liquid manure; *g*, ground level. (From Hutchison.)

Experience with maggot traps has brought out the following points: In the first place, the trap is more effective when the manure is kept compactly heaped and well moist. This is to be explained by the fact that the larvæ seek a comparatively dry place in which to pupate, and crawl away from wet manure. A cistern should be built close to the trap, and a pump fitted so that liquids can be pumped on to the heap. (Fig. 2.) Each day, after the litter from the stable has been thrown on the heap, just enough water should be added to moisten it thoroughly without causing leaching. The ideal arrangement would be to have water-tight floors in the stalls and drains leading to the cistern. The liquid manure collecting in the cistern could be pumped on the manure heap, thus not only maintaining the moisture content necessary to insure the greatest amount of migration, but also adding to the manure the valuable constituents of the urine. It happens, too, that keeping the manure carefully heaped and watered promotes the anaerobic fermentation and tends to prevent to some degree the loss of ammonia and gaseous nitrogen.

In the second place, the platform should stand not less than 1 foot above the concrete floor. This is to facilitate cleaning the floor of maggots and the débris which unavoidably accumulates there. The floor should be cleaned at least once a week, and all liquids run into the cistern, in order to prevent mosquitoes from breeding in the water in the floor of the trap. A thin film of oil can be used to prevent mosquito breeding in the cistern.

A third point of importance is that old manure is unfavorable for fly breeding. Experiments have shown that after manure has been standing on a maggot trap for eight to ten days it is practically free from maggots, and no more will appear in it. This means that a given lot of manure need remain on the maggot trap for only ten days in order to prevent any breeding taking place in it.

The maggot trap is simple, easily constructed, and cheap. Practically the only cost is the initial one for the construction. Very little extra labor is required to operate it. Only a few minutes each day are necessary to water the manure after the stable cleanings have been added to the heap. Cleaning the floor to dispose of the maggots and to prevent mosquito breeding will take about half an hour once a week.

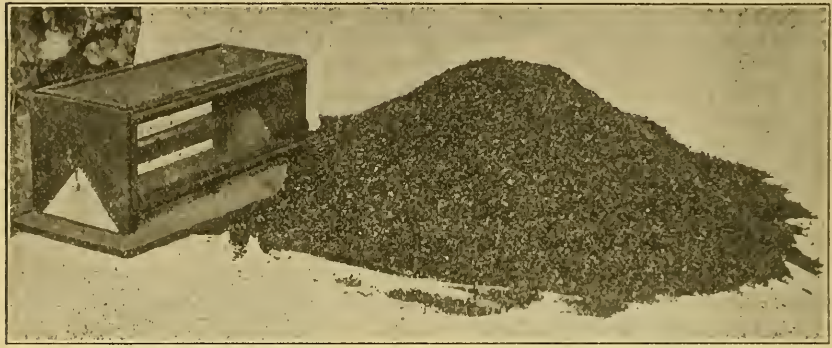
That the maggot trap is effective has been shown by the junior author's observations at the Maryland Agricultural College. It was found that the trap destroyed 99 per cent. of the larvæ breeding there, and that the number of flies at the barn and around the college kitchen was reduced from 67 to 76 per cent. That the reduction in the prevalence of flies was not equal to the percentage of larvæ destroyed was ascribed to the fact that several other piles of untreated manure were breeding out flies at near-by stables, from which places they were attracted to the barn and kitchen.

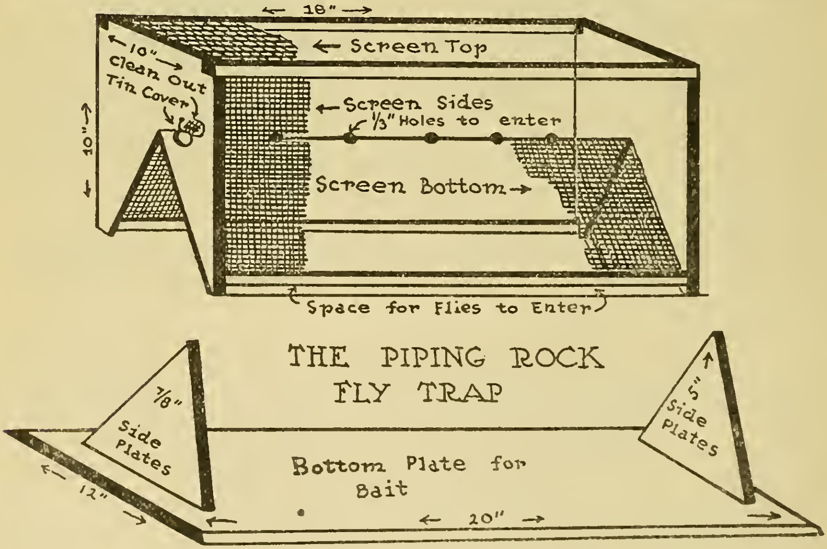
Maggot traps may be constructed in almost any size and to suit almost any conditions, and appear to be especially adapted to meet the problem of fly control under rural conditions.

Two of these traps were placed behind the stables of the Myopia Hunt Club, Hamilton, Mass., in the spring of 1916. The wooden platform was surrounded, except for the loading space, with a fence of chicken wire about 4 feet high to aid in loading the manure and keeping it in place. Where running water is available, with a head, fire sprinklers may be placed over the manure so that the manure can be moistened by turning a valve, instead of with a hose, requiring labor.

These traps were very successful in looking after the manure from about 60 horses for a month, and the fly nuisance was much abated. Of course, flies breed in a large stable in spite of these traps, and they should be supplemented by large fly traps made on the principle that a fly in its efforts to get out of any enclosure will always fly or crawl upwards. The following article appearing in the "New York Times Magazine," Oct. 1, 1916, describing the fly trap used at the Piping Rock Club, Long Island, N. Y., will be of interest: —

> The evidence of the members of the club diners, who have been rid of the fly pest this summer for the first time, is amply corroborated by what the coroner would call the *corpus delicti*. You cannot prove a murder without a body, and you cannot prove the efficacy of a fly trap without dead or captured flies. The Piping Rock Club had 1,000,000 such flies. See them heaped up in the picture, but do not try to count them. It is not necessary. The club vouches for that





Device that solved the fly problem for the Piping Rock Country Club.

heap. The "million" is not a guess, nor merely that traditional "millions of flies" that make sleep after daylight impossible in a poorly kept house or drives you unfed from a cheap restaurant. The million in this case is a careful estimate, based on the counting of the dead flies in several small batches and weighing each batch on accurate scales. They averaged 6,000 dead flies to the ounce, and the catches were put together until there were approximately the million for the purpose of the photographic evidence.

All these flies were caught in the early part of the summer in the Piping Rock traps placed about the grounds, particularly between the clubhouse and the stables (but none of them in the house or on the verandas), and baited with fish bones. Sugar or molasses or any other favorite fly food would do as well. Not only were the open-air dining spaces rid of the pests, but there have been no flies in kitchens or pantries all summer, and the stables themselves have been free of them.

If such traps were generally used in this city, for example, on the wharves, especially at the garbage docks of the street cleaning department, in the neighborhoods of the great food markets, at hotels and restaurants, in the tenement streets and elsewhere, Mr. McKee is confident that New York would be a much more healthful and comfortable place to spend the summer in.

The trap may be made of any size, as the principle is the same, and based on the fact that a fly in its efforts to get out of any inclosure will always fly or crawl upward. As shown in the detailed drawing, the fly crawls under the wire netting on to the white base board (painted white as an added lure) where the bait is placed. After feeding, the fly finds itself under an inverted V-shaped piece of screening, with half a dozen small holes along the top. It crawls up the sloping sides of the prison or buzzes its way to the top till it finds one of the holes, through which it goes into the trap proper, simply a screened rectangle placed above the V above the bait, and that is the end of the fly's freedom.

As flies are bred in garbage it is well to incinerate this waste product daily at summer hotels, large country houses and country clubs.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of February, 1917, samples were collected in 27 cities and towns.

There were 350 samples of milk examined, of which 59 were below the legal standard, 1 sample was skimmed milk not properly labeled, and 4 samples contained added water. There were 130 samples of food examined, of which the following were adulterated: 2 samples of cocoa containing sugar and the percentage not stated on the label, 3 samples of decomposed eggs, 2 samples of Hamburg steak containing sulphites and not so labeled, 13 samples of sausages containing starch in excess of 2 per cent., 6 samples of scallops containing added water, and 3 samples of vinegar low in acid.

There were 80 drugs examined, of which 8 were adulterated. These consisted of spirit of anise, spirit of camphor, spirit of nitrous ether, spirit of peppermint and tincture of iodine, somewhat deficient in the active ingredient.

There were 34 convictions obtained for violation of the laws, $560 in fines being imposed. John W. Keenan of Waltham was convicted for violation of the milk laws, and appealed his case. Charles Kechejian of Boston, Percy Pappazian of Brockton, Robert J. M. Fyfe of Boston, Jacob Ginsburg of Boston, Benjamin Racoff of Waltham, Michael Borowik of Fall River, Gaudenza Luzio of Dorchester, Arthur T. Wild of New Bedford, and Philip Katz of Brockton were convicted for violation of the food laws. Messrs. Kechejian and Ginsburg appealed their cases. Frank Janes, Mihran B. Yardumian and William Donaghy of Boston were convicted for violation of the drug laws. Mr. Donaghy appealed his case. Charles McArdle of Burlington, Florando Verrecchia of Lawrence, and Pietro Gangi of Lawrence were convicted for violation of the slaughtering laws. Mr. Verrecchia appealed his case. Hyman Ansel of Roxbury, Gideon K. Baker of Brockton, William Bundis of Brockton, Rebecca Cherry of Roxbury, Ignardios Kazanjian of Winthrop, on two counts, Thomas Lampos of Brockton, Abraham D. Levins of Dorchester, on two counts, James Saliba of Lawrence, on two counts, Philip Swartz of Winthrop, on two counts, Florando Verrecchia of Lawrence, Abraham Karras of Winthrop, Benj. Rothberg of Lowell, and Nazarith Sherividan of Roxbury were convicted for violation of the cold-storage laws. Mr. Saliba appealed both of his cases.

There were 10 confiscations made, of which 3 were of articles in cold storage. These consisted of 337 pounds of sour salmon, 2,270 pounds of dried and soiled tack mackerel, and 1,850 pounds of miscellaneous fish. The other 7 confiscations consisted of 400 pounds of tuberculous beef, 342½ pounds of immature veal, 60 pounds of tainted blood sausage, and 17 pounds of decomposed fresh pork.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

Two samples of milk containing added water, produced by Henry J. Penney of Saugus; 1 sample of Sovereign Cocoa containing sugar and the percentage not stated on the label, distributed by the Union Pacific Tea Company, N. Y.; 1 sample of Epps's Cocoa containing sugar and the percentage not stated on the label, manufactured by

James Epps & Co., Ltd., London, Eng.; 1 sample of vinegar low in acid, obtained from Mr. Ames of Natick; 1 sample of vinegar low in acid, obtained from Mr. Cutter of Weston; 1 sample of scallops containing added water, from H. O. Atwood of Boston; 1 sample of scallops containing added water, from A. J. Martin of Nantucket; 1 sample of scallops containing added water, from Anton Lonzo Dano of Nantucket; 1 sample of scallops containing added water, from M. J. Silvia of Nantucket; 1 sample of scallops containing added water, from Antone C. Silvia of Nantucket; and 1 sample of scallops containing added water, from John Donellis of Nantucket.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR FEBRUARY, 1917.

General Prevalence.

The total number of communicable diseases reported for February (6,421) shows an increase as compared with the corresponding month last year (5,960). This increase is due to the high rate of prevalence of measles, mumps and chicken pox, which have been epidemic in several communities.

Smallpox. — Two cases of smallpox were reported, both being imported from outside the State, one from Connecticut and the other from Iowa. The cases were discovered in the eruptive stage, and the local boards of health took prompt action to prevent the spread of the disease. One of these cases occurred on the premises of a milk handler, but no more cases followed.

Anterior Poliomyelitis. — Two cases for this month compares favorably with three cases reported in February, 1916, this number being the endemic rate of the disease for this month for the past few years in Massachusetts.

Milk. — During the month in ten separate instances communicable diseases have been reported in families of milk handlers. In eight instances no evidence was obtained to indicate that any secondary cases had been caused by infection through the milk. In one instance secondary milk-borne cases of scarlet fever were traced. In the other a distinct outbreak of septic sore throat resulted.

Epidemics and Outbreaks.

There were a few outbreaks during the month, none, however, assuming serious proportions. The following are the most interesting of these outbreaks: —

Diphtheria. — During the past month Cambridge has had a considerable increase in this disease; inquiry shows that contact with unrecognized cases, and carelessness in families where the disease exists, has resulted in a high morbidity rate. In many instances multiple cases have occurred in families.

An outbreak occurred in Webster, and investigation showed 4 cases of diphtheria in one family where no doctor was called until the fourth case, a baby, was dying. The first 3 cases in this family were responsible for 13 other cases in the neighborhood through contact with these children having sore throats.

The outbreak in Gardner in January has continued during the past month, due to missed and unrecognized cases.

Scarlet Fever. — A small outbreak of 13 cases in Malden started the last part of January and continued during February. Investigation by the local board of health showed that 10 of these cases were due to contact and 3 cases were due to milk. An inquiry into the source of the milk supply disclosed 3 cases of scarlet fever in the family of a small milk dealer, whose license to keep cows has since been revoked by the local board of health.

Small outbreaks have occurred in Westfield, Montague and Winthrop, the spread being largely due to unrecognized mild cases.

Septic Sore Throat. — An outbreak of undetermined size, but at least 75 cases, occurred in Dedham and Brookline, due to infected milk. The milk supply is now being pasteurized and no more cases are appearing.

Measles. — Measles has been epidemic in Fall River during the winter, and this situation has occurred because sick children were allowed to attend school after the onset of the disease, the parents not recognizing the danger of allowing children with a mild sore throat to attend school; and thus the disease was spread through contact with other children.

Measles should receive more attention from the parents, and physicians should be called in more often than has been the case in the past. This winter the fatality rate is running about 3 per cent., due to children coming down with pneumonia or some other disease shortly after they have apparently recovered from the measles, because in their weakened condition they are more susceptible. The above condition has been found in Natick, Framingham, Medford, Fall River and Lexington, and in most other communities where the disease has existed this year.

Mumps. — In Framingham 288 cases of mumps were reported during January and February. It is interesting to note that less than half of these cases had medical attendance, the remainder being found when they came to the office of the local board of health for school certificates.

RARE DISEASES.

Anterior Poliomyelitis. — One case each was reported from Beverly and Boston.

Cerebrospinal Meningitis. — One case was reported from Beverly, 3 cases from Boston, and from Fall River, Lynn, Lowell, Milford and New Bedford, 1 case each.

Dog Bite. — One case each was reported from Attleboro, Falmouth and Worcester.

Dysentery. — One case was reported from Boston.

Malaria. — One case each was reported from Amherst and Boston.

Septic Sore Throat. — There were 7 cases reported from Boston, 2 from Cambridge, and from Chelsea, Fall River, Gardner, Mansfield, Medford and Newburyport, 1 case each.

Smallpox. — One case each was reported from Bernardston and Boston.

Tetanus. — One case each was reported from Lawrence and Malden.

Trachoma. — One case each was reported from Boston, Lawrence and Whitman.

Trichinosis. — One case was reported from Boston.

DISTRIBUTION.

All Communicable Diseases.

	January, 1917.	February, 1917.	February, 1916.
Total cases,	6,458	6,421	5,960
Case rate per 100,000 population,	171.0	170.0	158.0

Certain Prevalent Diseases.

	January, 1917.	February, 1917.	February, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[1]
Diphtheria: —				Cambridge, (23) 62 Haverhill, (10) 17 Lowell, (25) 41 Somerville, (17) 27 Webster, (1) 17 Gardner, (2) 29 Leominster, (7) 16 Shirley, (0) 6 Pelham, (0) 4 Springfield, (12) 37
Total cases,	869	783	711	
Case rate per 100,000 population,	23.0	20.7	18.9	
Measles: —				Fall River, (20) 370 New Bedford, (40) 80 Milton, (5) 37 Sharon, (0) 21 Melrose, (16) 100 Merrimac, (0) 70 Newburyport, (0) 22 Arlington, (1) 28 Lexington, (1) 113 Medford, (36) 75 Framingham, (3) 40 Newton, (30) 66 Wellesley, (1) 10 Ayer, (0) 13 Clinton, (1) 20 Lancaster, (0) 40 Princeton, (1) 10 Templeton, (1) 12 Deerfield, (0) 32 Monson, (0) 13 Northampton, (3) 28 Whately, (0) 21 Charlemont, (0) 14 Greenfield, (1) 79
Total cases,	1,886	2,193	1,934	
Case rate per 100,000 population,	50.0	58.0	51.2	
Scarlet fever: —				Westfield, (3) 18 Montague, (1) 14
Total cases,	673	597	772	
Case rate per 100,000 population,	17.8	15.8	20.4	
Typhoid fever: —				
Total cases,	70	45	38	
Case rate per 100,000 population,	1.9	1.2	1.0	
Whooping cough: —				
Total cases,	273	181	792	
Case rate per 100,000 population,	7.2	4.8	21.0	
Tuberculosis, pulmonary: —				
Total cases,	720	666	685	
Case rate per 100,000 population,	19.1	17.6	18.1	
Tuberculosis, other forms: —				
Total cases,	62	71	43	
Case rate per 100,000 population,	1.6	1.9	1.1	

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	No.	Occupation.	Locality.	Sex.	Age.	Color.
Aniline oil, . . .	1	Rubber worker, .	Chicopee, . .	M	30	W
Caisson, . . .	1	Lock tender, . .	Boston, . .	M	38	W
Lead poisoning, . .	1	Steam fitter, . .	Boston, . .	M	21	W
Lead poisoning, . .	1	Compositor, . .	Boston, . .	M	39	W
Lead poisoning, . .	2	Metal worker, . .	Boston, . .	M	26 and 52	W
Lead poisoning, . .	3	Lead pipe, . .	Boston, . .	M	34, 39, 64	W
Lead poisoning, . .	2	Painter, . . .	Boston, . .	M	31 and 55	W
Lead poisoning, . .	1	Electric wire worker,	Boston, . .	M	29	W
Lead poisoning, . .	2	Painter, . . .	Lawrence, . .	M	36 and 63	W
Lead poisoning, . .	2	Painter, . . .	Quincy, . .	M	32 and 41	W
Lead poisoning, . .	1	Painter, . . .	Groveland, . .	M	30	W
Lead poisoning, . .	1	Painter, . . .	Lynn, . . .	M	22	W
Lead poisoning, . .	1	Painter, . . .	Cambridge, .	M	29	W
Lead poisoning, . .	2	Paint mixer, . .	Wellesley, . .	M	26 and 38	W
Lead poisoning, . .	1	Riveter, . . .	Quincy, . .	M	23	W
Lead poisoning, . .	1	Blacksmith, . .	Watertown, . .	M	16	W
Lead poisoning, . .	1	Rubber worker, . .	Watertown, . .	M	36	W
Lead poisoning, . .	1	Pasting grids., . .	Cambridge, .	M	31	W
Lead poisoning, . .	1	Furnace man, . .	Worcester, . .	M	28	W
Lead poisoning, . .	1	Molder's helper, .	Cambridge, .	M	33	W

CASES AND DEATHS[1] FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	14	8	852	2	869	79	41	–	1886	31	745	–
2	Cities over 200,000.													
3	Boston,	778,500	5	4	266	–	230	25	10	–	353	2	216	–
4	Cities, 150,000-200,000.													
5	Worcester,	170,077	–	–	6	–	34	2	–	–	6	2	9	–
6	Cities, 100,000–150,000.	*570,968*	*1*	*1*	*70*	*1*	*178*	*17*	*12*	–	*568*	*19*	*31*	–
7	Fall River,	127,218	–	–	14	–	19	5	–	–	293	10	–	–
8	New Bedford,	115,272	–	–	19	–	11	1	7	–	94	2	9	–
9	Cambridge,	110,582	–	–	22	–	76	3	1	–	48	1	12	–
10	Springfield,	109,174	1	1	11	–	35	3	3	–	1	–	3	–
11	Lowell,	108,722	–	–	4	1	37	5	1	–	132	6	7	–
12	Cities, 50,000–100,000.	*511,498*	*3*	*1*	*102*	*1*	*90*	*14*	*3*	–	*86*	–	*26*	–
13	Lynn,	98,659	–	–	11	–	19	4	1	–	4	–	4	–
14	Lawrence,	92,187	1	1	13	1	14	1	–	–	2	–	4	–
15	Somerville,	91,102	1	–	18	–	13	2	1	–	44	–	2	–
16	Brockton,	64,668	–	–	30	–	7	–	1	–	2	–	10	–
17	Holyoke,	62,179	–	–	3	–	11	5	–	–	1	–	–	–
18	Haverhill,	51,806	1	–	9	–	13	1	–	–	22	–	1	–
19	Malden,	50,897	–	–	18	–	13	1	–	–	11	–	5	–
20	Cities and Towns, 25,000–50,000.	*498,330*	–	*1*	*141*	–	*81*	*7*	*6*	–	*195*	–	*109*	–
21	Chelsea,	48,273	–	–	26	–	8	–	–	–	2	–	8	–
22	Newton,	44,573	–	1	9	–	1	–	–	–	72	–	37	–
23	Quincy,	44,221	–	–	4	–	6	–	1	–	19	–	34	–
24	Pittsfield,	42,913	–	–	5	–	3	1	–	–	1	–	–	–
25	Fitchburg,	40,464	–	–	19	–	14	2	–	–	9	–	1	–
26	Salem,	39,872	–	–	18	–	2	1	–	–	–	–	4	–
27	Everett,	39,588	–	–	5	–	16	–	–	–	15	–	1	–
28	Taunton,	37,001	–	–	3	–	4	–	–	–	–	–	–	–
29	Brookline,	36,007	–	–	14	–	4	–	2	–	11	–	3	–
30	Medford,	33,758	–	–	1	–	5	–	–	–	60	–	1	–
31	Chicopee,	32,230	–	–	1	–	8	3	3	–	2	–	–	–
32	Waltham,	31,179	–	–	36	–	2	–	–	–	4	–	20	–
33	Revere,	28,251	–	–	–	–	8	–	–	–	–	–	–	–
34	Cities and Towns, 10,000–25,000.	*569,407*	–	*1*	*117*	–	*140*	*10*	*2*	–	*244*	*2*	*257*	–
35	Beverly,	24,863	–	–	16	–	3	–	–	–	–	–	–	–
36	Gloucester,	24,513	–	–	1	–	–	–	–	–	1	–	–	–
37	Northampton,	22,636	–	–	3	–	1	–	–	–	2	1	5	–
38	North Adams,	22,042	–	–	1	–	2	–	–	–	1	–	–	–
39	Peabody,	19,908	–	–	5	–	1	–	–	–	–	–	–	–
40	Attleboro,	19,480	–	–	–	–	8	–	–	–	3	–	–	–
41	Westfield,	19,456	–	–	3	–	3	–	–	–	–	–	1	–
42	Watertown,	18,123	–	–	1	–	7	–	–	–	6	–	12	–
43	Leominster,	17,675	–	–	6	–	4	–	–	–	14	–	–	–
44	Melrose,	17,394	–	–	6	–	1	–	2	–	55	–	1	–
45	Framingham,	17,146	–	–	21	–	3	–	–	–	46	1	207	–
46	Gardner,	17,116	–	–	3	–	41	3	–	–	6	–	3	–
47	Woburn,	16,896	–	–	–	–	5	1	–	–	–	–	–	–
48	Arlington,	16,524	–	–	1	–	1	1	–	–	24	–	–	–
49	Marlborough,	15,546	–	–	–	–	1	–	–	–	1	–	–	–
50	Newburyport,	15,470	–	–	5	–	–	–	–	–	14	–	–	–
51	Methuen,	15,137	–	–	–	–	5	1	–	–	–	–	–	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and correction, the deaths given above, while approximately correct, are not absolutely complete.

TO THE PUBLIC HEALTH, JANUARY, 1917.

38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		176A Dog Bite.		100 Septic Sore Throat.		24 Tetanus.		75A Trachoma		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
204	–	673	7	719	411	62	58	70	11	273	14	11	10	4	–	20	2	2	–	6	–	1
																						2
79	–	112	1	211	99	13	15	7	2	17	2	4	–	–	–	15	–	–	–	3	–	3
																						4
17	–	56	1	27	19	4	5	2	–	6	3	1	1	–	–	–	–	–	–	–	–	5
35	–	*104*	*3*	*155*	*78*	*11*	*10*	*14*	*2*	*34*	*4*	*3*	*3*	*2*	–	*2*	*2*	*1*	–	*2*	–	6
14	–	9	1	53	25	–	2	9	–	12	2	–	–	–	–	–	–	–	–	–	–	7
6	–	14	–	32	9	3	2	2	–	7	1	1	2	–	–	–	–	–	–	1	–	8
6	–	26	–	22	17	3	1	2	–	1	–	–	–	–	–	1	–	–	–	–	–	9
3	–	44	2	15	7	3	1	–	1	14	–	1	1	–	–	1	2	–	–	–	–	10
6	–	11	–	33	20	2	4	1	1	–	1	1	–	2	–	–	–	–	–	1	–	11
29	–	*69*	–	*74*	*41*	*9*	*6*	*20*	*3*	*31*	*3*	–	–	*1*	–	–	–	–	–	*1*	–	12
1	–	22	–	19	12	1	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	13
3	–	3	–	15	12	1	1	11	2	9	–	–	–	–	–	–	–	–	–	1	–	14
3	–	12	–	10	4	2	1	–	–	5	–	–	–	–	–	–	–	–	–	–	–	15
9	–	4	–	4	5	4	2	2	–	1	–	–	–	1	–	–	–	–	–	–	–	16
4	–	13	–	3	3	–	1	2	1	–	2	–	–	–	–	–	–	–	–	–	–	17
4	–	1	–	15	4	1	–	2	–	15	1	–	–	–	–	–	–	–	–	–	–	18
5	–	14	–	8	1	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	19
17	–	*73*	–	*92*	*55*	*10*	*9*	*11*	*3*	*68*	*1*	–	–	–	–	*1*	–	*1*	–	–	–	20
3	–	2	–	19	6	1	–	3	1	5	–	–	–	–	–	–	–	–	–	–	–	21
–	–	6	–	2	–	1	1	4	–	–	–	–	–	–	–	–	–	–	–	–	–	22
1	–	7	–	9	2	–	–	1	–	12	1	–	–	–	–	–	–	–	–	–	–	23
2	–	5	–	10	6	1	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	24
4	–	4	–	10	5	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	25
–	–	5	–	12	7	4	3	–	–	26	–	–	–	–	–	–	–	–	–	–	–	26
3	–	14	–	6	5	–	–	1	–	2	–	–	–	–	–	–	–	–	–	–	–	27
1	–	1	–	5	8	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	28
–	–	5	–	5	3	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	29
–	–	5	–	2	1	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	30
2	–	8	–	8	6	1	1	–	–	3	–	–	–	–	–	1	–	–	–	–	–	31
–	–	4	–	1	4	1	1	–	–	18	–	–	–	–	–	–	–	–	–	–	–	32
1	–	7	–	3	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	33
18	–	*134*	–	*67*	*41*	*8*	*5*	*9*	*1*	*33*	*1*	*2*	*3*	–	–	*2*	–	–	–	–	–	34
2	–	2	–	4	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	35
1	–	–	–	3	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	36
–	–	2	–	8	6	–	–	–	–	–	–	1	–	–	–	1	–	–	–	–	–	37
2	–	4	–	1	3	2	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	38
2	–	–	–	2	2	–	–	–	–	5	–	–	–	–	–	–	–	–	–	–	–	39
–	–	11	–	2	3	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	40
–	–	18	–	10	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41
–	–	4	–	4	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	42
1	–	2	–	3	–	2	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	43
2	–	5	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	44
–	–	1	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	45
–	–	9	–	1	2	–	–	–	–	–	–	–	3	–	–	–	–	–	–	–	–	46
–	–	3	–	1	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	47
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	48
–	–	2	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	49
2	–	7	–	3	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	50
–	–	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	51

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,930	–	–	–	–	2	–	–	–	–	–	–	–
53	Weymouth,	14,444	–	–	–	–	–	–	–	–	2	–	–	–
54	Milford,	13,962	–	–	–	–	1	–	–	–	–	–	–	–
55	Winthrop,	13,918	–	–	4	–	–	–	–	–	24	–	8	–
56	Greenfield,	13,590	–	1	9	–	–	–	–	–	24	–	–	–
57	Wakefield,	13,389	–	–	–	–	6	2	–	–	1	–	–	–
58	Adams,	13,302	–	–	–	–	3	–	–	–	–	–	–	–
59	Plymouth,	13,273	–	–	–	–	1	–	–	–	–	–	–	–
60	Clinton,	13,243	–	–	5	–	2	–	–	–	3	–	–	–
61	Webster,	13,031	–	–	10	–	20	1	–	–	–	–	–	–
62	Norwood,	12,286	–	–	6	–	4	–	–	–	–	–	–	–
63	West Springfield,	12,273	–	–	–	–	4	–	–	–	–	–	–	–
64	Danvers,	11,955	–	–	2	–	–	–	–	–	–	–	–	–
65	Dedham,	11,820	–	–	1	–	3	–	–	–	1	–	–	–
66	Natick,	11,673	–	–	3	–	2	–	–	–	10	–	20	–
67	Saugus,	11,189	–	–	–	–	–	–	–	–	–	–	–	–
68	Easthampton,	10,430	–	–	–	–	5	1	–	–	4	–	–	–
69	Athol,	10,333	–	–	–	–	–	–	–	–	–	–	–	–
70	Winehester,	10,312	–	–	4	–	1	–	–	–	2	–	–	–
71	Bridgewater,	10,129	–	–	1	–	–	–	–	–	–	–	–	–
72	TOWNS, 5,000-10,000.	*355,823*	*3*	–	*84*	–	*70*	*2*	*2*	–	*210*	*1*	*23*	–
73	TOWNS, 2,500–5,000.	*181,232*	*1*	–	*45*	–	*22*	*1*	*4*	–	*95*	*1*	*54*	–
74	TOWNS UNDER 2,500.	*213,171*	*1*	–	*21*	–	*21*	*1*	*2*	–	*128*	*4*	*20*	–
75	STATE INFIRMARY,	–	–	–	–	–	3	–	–	–	1	–	–	–

In addition to the above there occurred 1 case of anthrax in North Adams; 1 case of dysentery in Fall
field; 1 case of malaria in Boston; 1 death from pellagra at the Tewksbury State Infirmary; 2 cases of

TO THE PUBLIC HEALTH — *Concluded.*

38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-36 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		176A Dog Bite.		100 Septic Sore Throat.		24 Tetanus.		75A Trachoma.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	–	–	1	–	–	–	2	1	–	–	–	–	–	–	–	–	–	–	–	–	52
–	–	1	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	53
–	–	7	–	–	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	54
–	–	1	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	55
1	–	14	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	56
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	57
1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	58
–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	59
–	–	4	–	1	1	–	–	–	–	16	–	–	–	–	–	–	–	–	–	–	–	60
–	–	4	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	61
1	–	8	–	3	–	–	–	–	–	8	–	–	–	–	–	–	–	–	–	–	–	62
–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	63
–	–	3	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	64
1	–	1	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	65
1	–	4	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	66
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	67
–	–	5	–	3	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	68
–	–	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	69
–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	70
1	–	1	–	1	3	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	71
5	–	*72*	*2*	*26*	*24*	*7*	*4*	*5*	–	*69*	–	*1*	*1*	–	–	–	–	–	–	–	–	72
3	–	*20*	–	*9*	*11*	–	*1*	*2*	–	*2*	–	–	*2*	*1*	–	–	–	–	–	–	–	73
1	–	*32*	–	*9*	*29*	–	*3*	–	–	*13*	–	–	–	–	–	–	–	–	–	–	–	74
–	–	1	–	49	14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	75

River, and 3 deaths, 1 in Easton, 1 in Salem and 1 in Worcester; 1 case and 1 death from glanders in Spring-
smallpox, 1 in Lee and 1 in Worcester.

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

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PUBLIC HEALTH BULLETIN

ISSUED MONTHLY

BY THE

STATE DEPARTMENT OF HEALTH

OF MASSACHUSETTS

APRIL, 1917

Vol. 4, No. 4

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass., under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

SOCIAL HYGIENE.

IN view of what was stated in a recent issue of the Bulletin with reference to the prevention and suppression of syphilis (Vol. 4, pp. 21, 22) it is manifest that the problem of social hygiene requires something more than providing remedies for the treatment of venereal diseases. Other means of prevention must be employed. The most effective prevention is possible only when people in general possess convictions on the subject, realize the handicaps and serious consequences which occur as the result of venereal disease, and follow hygienic principles of living, from choice and desire.

Education is the most effective method making for progress along these lines. In this connection the following statement, prepared for the Bulletin by an officer of the Massachusetts Society for Social Hygiene, is of interest: —

The Massachusetts Society for Social Hygiene has arrived in five years at a clear understanding of its best field of work and of the most effective methods in its peculiar field. Its field is educational. It is teaching in quiet ways such parts of sex or social hygiene as may be expected to diminish the amount of sexual transgression and vice, and to check the spread of venereal diseases. It is, of course, interested in constructive and remedial legislation and in law enforcement, but it leaves those fields to other agencies. It is acting on the belief that public progress in relation to sex hygiene and eugenics is to be procured chiefly through educational methods.

It is engaged in a work comparatively new, which experience has proved to be essential in modern communities to the conservation of morality, efficiency and life itself.

Through the work the society has already done it has demonstrated that there is an active, intelligent and increasing demand for its services.

The society's methods of work are as follows: —

1. It employs two paid agents who give all their time to correspondence, to talking to small groups of boys or young men, of girls or young women, or of fathers or mothers, assembled under the auspices of numerous schools, colleges, clubs, associations, settlements, churches, friendly societies, young men's or young women's Christian associations, women's clubs and men's clubs, and to advising the numerous inquirers who come to the office of the society. Both these agents have been practicing physicians, one a man and the other a woman. It is the policy of the society to address its instruction to either males or females,

but not to both together. Exceptions to this rule, however, are permissible under proper conditions. It avoids publicity and exaggeration, and directs attention to the natural and wholesome in sex relations rather than the morbid and vicious, to health rather than disease.

2. The society enlists the gratuitous services of four physicians who are willing to lecture occasionally to groups of men, or sometimes to mixed audiences. The field for work of this kind is very wide, much wider than the society is able to cultivate.

3. The society maintains a lending library of carefully selected books on social hygiene and the kindred subjects. These books are much used by readers at the office, and are much borrowed by groups to which lectures have been given. From the library go out thousands of copies of a reading list which the society prepared. The public health nurses, trained by the Instructive District Nursing Association, use the reading list and leaflets of the society.

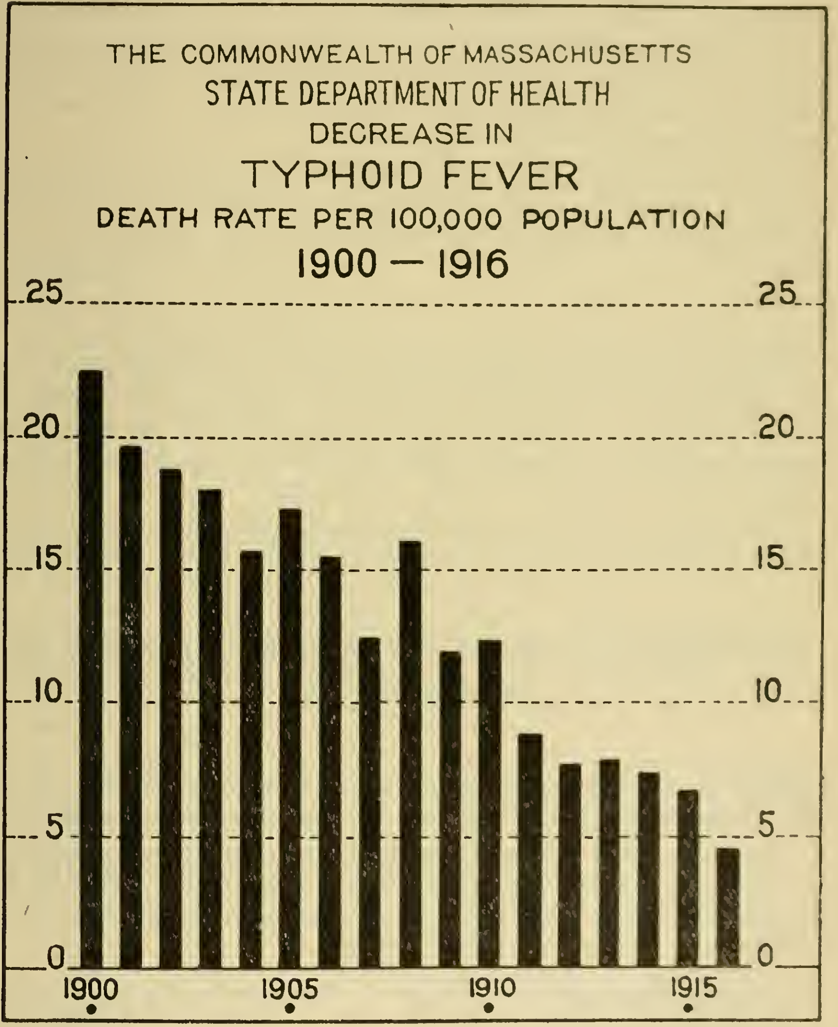
It maintains its office and library at 50 Beacon Street. Its officers are Charles W. Eliot, president; David L. Edsall, M.D., vice-president; Ernest B. Dane, treasurer; Irving E. Stowe, M.D., secretary.

THE PASSING OF TYPHOID FEVER IN MASSACHUSETTS.

THE typhoid death rate for the State for 1916 shows a remarkably low figure, 4.5 per 100,000, the lowest figure that Massachusetts has ever known. The persistent decrease in the past three decades has been due to many sanitary methods carried out in the State, — primarily to the prevention of sewage pollution of public and private water supplies, supplemented in later years by such agencies as the increasing pasteurization of milk, inspection of the production of milk, investigation into causes of outbreaks, food inspection and the use of laboratory facilities in confirming diagnoses and in detecting carriers.

Typhoid vaccine is now being used extensively by many physicians as a prophylactic. Local authorities are increasingly urging the necessity for carrying out hospitalization of cases because of the difficulty of preventing its spread to other members of the family when it is treated in the household. A recent instance may be cited where four cases of typhoid fever followed a primary case that was being cared for at home, one of the four secondary cases being the nurse. Immunization of members of a household by typhoid vaccine is to be encouraged in families where a case of typhoid occurs, as this will prevent the appearance of numerous secondary cases that constantly appear.

Typhoid carriers proved to be a considerable factor in typhoid fever in the State last year, and special attention is now being directed toward those persons who are suspected of harboring the bacillus of the disease, to prevent them from working at an occupation in which food is being handled.



An interesting fact is that at least 140 of the 1,515 reported cases of typhoid fever last year are known to be due to carriers, the infection being transmitted by contact or by milk, and there were doubtless many unknown carriers. There were found during the past year eight carriers, and the preventing of these carriers from engaging in any occupation where food is handled by them should be a factor in decreasing the number of cases reported in the future.

When a few years ago health authorities began to deal in health problems through the medium of rates, a typhoid death rate of 15 or 20 per 100,000 was considered extremely low for a State or even a city. Then came the introduction of sanitary engineering, and more attention was paid to furnishing a pure water from a bacterial standpoint, the result being that water-borne diseases showed an immediate decrease in nearly every instance.

The low death rate of 4.5 per 100,000 shown by Massachusetts for 1916 is a mark that must be slowly approaching the limit of the typhoid death rate that can be hoped for by the methods that are being used at the present time. More thorough investigations by local boards of health from a carrier standpoint will eliminate many of the sporadic cases that are now appearing throughout the year.

The State, exclusive of Boston, has a rate of 4.7 per 100,000, which is a very low rate, considering the character of the population excluding its largest city. Boston reports a typhoid death rate of 3.4 per 100,000. Excluding the deaths from nonresidents, the rate for Boston would be 2.5.

This death rate of 4.5 per 100,000 population is the lowest rate for this disease of any State, as far as official figures on the disease disclose.

NOTIFICATION OF CONTAGIOUS DISEASE ON PREMISES OF MILK HANDLERS.

THE following circular letter recently mailed from the office of the Department calls attention to the successful co-operation between local boards of health and the Department in seeking to reduce cases of communicable disease the infection of which is transmitted through milk, and aims to increase the efficiency of such co-operation. The letter is self-explanatory.

State Department of Health,
State House, Boston.

Board of Health, , *Mass.*

Gentlemen: — Your attention is called to the following law in reference to the reporting of certain diseases when related to milk production or distribution.

Section 8 of chapter 75 of the Revised Laws, as amended by chapter 670 of the Acts of the year 1913, reads as follows: —

> SECTION 8. If smallpox or any other contagious or infectious disease declared by the state board of health to be dangerous to the public health exists or is likely to exist in any place within the commonwealth, the state board shall make an investigation thereof and of the means of preventing the spread of the disease, and shall consult thereon with the local authorities. It shall have co-ordinate powers as a board of health, in every city and town, with the board of health thereof, or with the mayor and aldermen of a city or the selectmen of a town in which there is no such board. It may require the officers in charge of any city or state institution, charitable institution, public or private hospital, dispensary or lying-in hospital, or any local boards of health or the physicians in any city or town to give notice of cases of any disease declared by the state board of health to be dangerous to the public health. Such notice shall be given either in the manner prescribed in sections forty-nine, fifty and fifty-two of chapter seventy-five of the Revised Laws, as amended by chapter four hundred and eighty of the acts of the year nineteen hundred and seven, or in such other manner as the state board of health may deem advisable. If any such officer, board or physician refuses or neglects to give such notice, he or they shall forfeit not less than fifty nor more than two hundred dollars for each offence.

Acting under the provisions of this section, the State Department of Health, at a meeting held April 3, 1917, voted that, beginning May 1, it shall be the duty of the officers in charge of any city or State institution, charitable institution, public or private hospital, dispensary or lying-in hospital, or any local board of health in any city or town, to give immediate notice (preferably by telephone or telegram, "collect") to the State Department of Health, State House, Boston, or to the State Health Officer of the district, in every case coming to their notice in which typhoid fever, dysentery, diphtheria, scarlet fever or tonsillitis has occurred in the household of any person engaged in the production, transportation or distribution of milk for public sale; and in every case coming to their notice in which typhoid fever, dysentery, diphtheria, scarlet fever or tonsillitis has been due, or presumably has been due, to the consumption of milk infected with material derived from persons infected with said diseases.

The co-operation of the local boards of health in the past has resulted in a marked diminution of milk outbreaks and epidemics, and further co-operation in carrying out the above method will result in a still greater reduction of epidemics due to milk.

Trusting that we shall have your hearty co-operation in this matter, I am

Yours very truly,

ALLAN J. McLAUGHLIN, M.D.,
Commissioner of Health.

LOBAR PNEUMONIA ADDED TO LIST OF REPORTABLE DISEASES.

AT a meeting of the Public Health Council on April 3, 1917, it was voted that the list of diseases declared as dangerous to public health, within the meaning of sections 49, 50 and 52 of chapter 75 of the Revised Laws, as amended by chapter 480 of the Acts of 1907, be amended by adding thereto lobar pneumonia.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of March, 1917, samples were collected in 40 cities and towns.

There were 518 samples of milk examined, of which 147 were below the legal standard, 3 samples were skimmed milk not properly labeled, and 33 samples contained added water. There were 255 samples of food examined, of which the following were adulterated: 2 samples of canned peas, which had been made from dried peas soaked before canning, and the cans not so labeled; 9 samples of decomposed eggs; 1 sample of decomposed fish; 1 sample of maple sugar containing cane sugar; 2 samples of decomposed beef; 3 samples of Hamburg steak containing sulphites and not so labeled; 1 sample of mincemeat containing benzoic acid and not so labeled; 1 sample of decomposed pork; 13 samples of sausage containing starch in excess of 2 per cent.; 1 sample of olive oil containing cottonseed oil; 22 samples of watered scallops; 3 samples of decomposed shrimp; and 7 samples of vinegar low in acid.

There were 107 drugs examined, of which 14 were adulterated. These consisted of 1 sample of alcohol not up to the professed standard under which it was sold, spirit of camphor, spirit of nitrous ether and tincture of iodine, somewhat deficient in the active ingredient.

There were 32 convictions obtained for violation of the laws, $665 in fines being imposed. Henry J. Penney of Saugus and Augustus Stadelman of Marlborough, on two counts, were convicted for violation of the milk laws. Joseph P. Best and Philip Opochinsky of Boston, Benjamin B. Lebzelter of Chelsea, Paul Drouin of Danvers, Samuel Kamensky of Charlestown, Michael Dagnase of Lynn and

Michael B. Cahan of Lowell were convicted for violation of the food laws. The Great Atlantic & Pacific Tea Company, Albert F. Brooks, on two counts, and George Mellor, on two counts, of Brockton were convicted for selling old eggs falsely advertised. The Great Atlantic & Pacific Tea Company appealed its case, and Mr. Mellor appealed both of his cases. Ivar Reenstierna of Boston was convicted for violation of the drug laws. The Booth Fisheries Company, Joseph Cefalu and Joseph Mantia of Boston, Gabriel Kahan, on two counts, and George O. Perrault, on two counts, of Lowell, Harry Hindman of Lawrence and William Ritvo and Morris Rosenberg of Winthrop were convicted for violation of the cold-storage laws. Samuel Alpert of Norton, on three counts, Sebastian Becker of Woburn, on two counts, and Charles H. Kemp of Billerica were convicted for violation of the slaughtering laws. Messrs. Alpert and Becker appealed all of their cases.

There were 9 confiscations made, consisting of 25 pounds of sour egg whites, 1,690 pounds of unclean smoked herring, 5 cases of frozen and decomposed lemons, 10 barrels of decomposed potatoes, 55 pounds of decomposed pork and 1,444½ pounds of immature veal.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

One sample of skimmed milk not properly labeled, produced by A. Spohr of Haverhill; 5 samples of milk containing added water, produced by J. W. Brown of Whitefield, N. H.; 6 samples of milk containing added water, produced by Augustus Stadelman of Marlborough; 8 samples of milk containing added water, produced by C. W. Leach of E. Burke, Vt.; 9 samples of milk containing added water, produced by H. P. Graves of Lyndonville, Vt.; 2 samples of milk containing added water, produced by Charles I. Hunt of Braintree; 3 samples of milk containing added water, produced by Bedros H. Bashian of Lexington; 1 sample of "You-No" brand peas, which were soaked peas not properly labeled, packed by Draper & Hirsch, Inc., Milford, Del.; 1 sample of "Iona" brand peas, which were soaked peas not properly labeled, put up for The Great Atlantic & Pacific Tea Company, Jersey City, N. J.; 1 sample of scallops containing added water, from Gove & Mollins, Boston; and 18 samples of scallops containing added water, from the following wholesalers in Nantucket: 1 sample each from Messrs. Joe M. Mello, Oscar Ryder, John Egle, J. S. Rodrigues, Manuel Reis, Charles G. Wheldon, A. B. Grant, Jos. J. Sylvia, John Donnellas, George Deuce, Elmer E. Ames and Benjamin F. Pease; and two samples each from Messrs. Phillip Murray, Jose Monez and S. Rowley.

SUGGESTED RULES AND REGULATIONS RELATIVE TO THE SANITARY PRODUCTION, TRANSPORTATION AND DISTRIBUTION OF MILK.

There is a movement throughout the United States to produce a uniform set of rules and regulations relative to milk, these regulations to represent the minimum sanitary conditions under which milk should be produced, transported and distributed.

At the request of Dr. Alsberg, chief, Bureau of Chemistry, United States Department of Agriculture, the Association of New England Food Executives appointed a committee of three to consider the preparation and submission of such a set of regulations. This committee consisted of Mr. Hermann C. Lythgoe, director of the Division of Food and Drugs of the Massachusetts State Department of Health, chairman; Mr. Frank E. Stadtmueller, Dairy and Food Commissioner of Connecticut; and Mr. A. M. G. Soule, chief, Bureau of Inspection, Maine Department of Agriculture.

The committee prepared and presented a set of regulations to the association upon March 1. At this meeting there were present representatives from the food inspection departments of all the New England States, representatives of the United States Department of Agriculture, and representatives of the boards of health of the cities of New York, Boston, Somerville and Newton. These regulations were carefully discussed, amended and adopted as representing, in the opinion of the association, the minimum requirements for the sanitary production, transportation and distribution of milk.

It is possible that local boards of health may desire to make regulations of this sort, or may desire to remodel their present regulations. These regulations are therefore printed with the view of establishing more uniformity in the regulations of our various local boards of health relative to milk.

RULES AND REGULATIONS.

A. *Production.*

1. All milk intended for sale for human consumption shall be obtained from healthy cows at least five days after and not less than fifteen days before calving.

2. Cows shall be kept clean and their flanks and udders shall be brushed or otherwise cleaned before milking, and the cows shall be milked with clean, dry hands, or by clean mechanical apparatus.

3. Milk shall be removed from the stable to a suitable place immediately

after milking each cow, and shall be immediately cooled to a temperature of or below 50° F. and kept at or below said temperature until delivered.

4. All utensils and receptacles used as containers of milk shall be thoroughly cleaned and sterilized, preferably with steam, and shall be protected from contaminating conditions until used.

5. Milk shall be strained through absorbent cotton or other suitable material, which should be used but once for this purpose.

6. The proprietor of a dairy producing milk for sale shall immediately give notice to the State Department of Health, and to the board of health of the city or town where the dairy is situated, of the presence of any communicable disease upon the premises or among his employees. No person infected with any communicable disease shall be permitted to participate in the production or sale of milk.

B. Transportation.

1. Milk shall be so transported that it shall not be liable to contamination from external conditions.

2. Milk shall be transported under conditions which will maintain a temperature of or below 50° F.

3. No person infected with a communicable disease shall be employed in the handling of milk during transportation.

C. Distribution.

1. No milk containing more than 1,000,000 bacteria per cubic centimeter, or any pathogenic bacteria, or having a temperature above 50° F., shall be sold or offered for sale to the consumer.

2. All cans, bottles or other containers used in the distribution of milk shall be thoroughly cleansed and sterilized before use and be kept from contamination until used, and all dealers engaged in the distribution of milk shall possess proper appliances for the cleaning and sterilization of utensils.

3. All premises upon which milk is processed, and all appliances used in processing, shall be so constructed that they can be easily cleaned, and all such premises and appliances shall be kept scrupulously clean.

4. No can, bottle or other container intended for use in the distribution of milk shall be filled with milk elsewhere than upon the premises maintained and equipped for that purpose.

5. No person infected with a communicable disease shall be employed in the processing or distribution of milk.

6. No person other than an employee shall be permitted to assist in the distribution of milk.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF FEBRUARY, 1917.

The following gives the total number of bacteriological examinations made in the laboratory of the State Department of Health during the month of February, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria,	840	79	270	114	377

	Number of Examinations.	Positive.	Negative.
Tuberculosis,	266	46	220
Typhoid fever (Widal test),	58	10	48
Typhoid fever (culture test),	18	4	14
Gonorrhœa,	95	2	93
Malaria,	1	–	1
Miscellaneous,	44		

Total number of examinations made, 1,282.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF MARCH, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of March, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria,	1,220	121	521	121	457

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis,	320	62	258	
*Typhoid fever (Widal test),	81	10	70	1
Typhoid fever (culture test),	15	2	13	
Malaria,	2	–	2	
Miscellaneous,	144			

Total number of examinations made, 1,782.

QUARTERLY REPORT UPON THE DISTRIBUTION OF BIOLOGICAL PRODUCTS AND DIAGNOSTIC OUTFITS.

The following gives the total number of biological products and diagnostic outfits distributed by the State Department of Health during the three months ending March 31, 1917: —

Biological Products.

Diphtheria antitoxin: —	
12,000 units (special for the Boston City Hospital),	931 bottles.
6,000 units (special for the Boston City Hospital),	140 bottles.
3,000 units,	13,255 bottles.
2,000 units (special for the Boston City Hospital),	81 bottles.
1,500 units,	3,248 bottles.
750 units,	1,874 bottles.
Smallpox vaccine: —	
Capillary tubes,	15,475
Bulk,	900
Typhoid vaccine: —	
Vials,	2,979
Bulk,	7,700
Antimeningitis serum,	259 bottles.
Silver nitrate solution,	12,258 ampoules.

Diagnostic Outfits.

Culture tubes,	4,298
Culture media,	136
Sputum bottles,	1,462
Widal outfits,	420
Typhoid culture outfits,	127
Malaria-Gonorrhœa outfits,	189

RÉSUMÉ OF COMMUNICABLE DISEASES FOR MARCH, 1917.

General Prevalence.

An increase occurred in the total number of cases of communicable diseases reported for March this year as compared with March, 1916. This increase, from 7,853 to 8,480, was confined chiefly to diphtheria, rubella and mumps. The 8,480 cases reported for March also show a marked increase over 6,415 cases reported in February of this year, the increase being distributed over all the communicable diseases, especially scarlet fever, measles, rubella and mumps.

Anterior Poliomyelitis. — Eight cases of this disease in seven scattered communities show it to be in its usual endemic status in the State.

Anthrax. — Four cases were reported during the month, all men employed in an occupation which required the handling of dried or salted imported hides. So far as can be learned, these cases were not connected with each other. One of these cases was a longshoreman who helped in unloading hides from a ship; the other cases were in leather factories.

Pulmonary Tuberculosis. — For the first quarter of the year this disease shows a slight increase as compared with the corresponding period of last year, the totals being 2,101 and 2,025, respectively. This slight increase is possibly a result of more careful and thorough diagnosis of incipient cases.

Typhoid Fever. — Although in 1916 the State established a death rate of 4.5 per 100,000 population for typhoid fever, for the first quarter of this year there were 184 cases of the disease reported, while for the corresponding period of 1916 there were 174 cases reported, an increase of 10 cases for this year over 1916. In order to equal last year's record it would seem to be a very simple method for local authorities to prevent secondary contact cases and trace probable typhoid carriers, so that the State may at least equal, if not excel, the 1916 rate.

Outbreaks and Epidemics.

Smallpox. — Five cases were reported for the month, all being in Worcester, where the focus of infection was established by an unrecognized case of the disease. The first case noticed was in a child who was brought into a hospital for sore eyes, where the eruption of smallpox was recognized. A prompt investigation of the home disclosed the fact that his brother also had smallpox, but was in the last stages of the disease. Neither of these children had been vaccinated, as they were not old enough to go to school, their ages being one and three years. The three cases that followed were in adults who had been in contact with, or in the same neighborhood with, the previous cases. The original source of infection in these cases was not established conclusively, but they were undoubtedly a result of the case reported in January from the same neighborhood.

Diphtheria. — A small outbreak occurred in Haverhill, 46 cases being reported there for the month of March and a total of 16 cases for the previous month. At first, investigation showed no connection between the cases, which for the most part were scattered over the city. Half of the cases were above the school age. Later, on March 14, a school child was taken sick, but no physician was called until the 18th, during which period three other cases appeared in the same household. The local board took prompt action and cultured 176 children in the school and neighborhood, which resulted in the finding of 14 positive cultures, one of which was from a school teacher. Thirty children were absent on the day of culturing, but were not allowed to return to school until they gave negative cultures. Immunizing doses were given to all children who played with the sick children.

Instances have occurred which suggest that greater care should be taken in obtaining swabs from the nose and throat of a patient before release from quarantine or from a hospital, as shown by the following occurrence: recently a patient was allowed to go home on a second negative release culture, but he still harbored the bacilli of the disease, with the result that three other cases followed among his brothers and sisters.

The outbreak in Gardner, starting the first of the year and resulting in 87 cases, continued through the first part of the month, but was finally stamped out by the firm and continued action of the local authorities.

Scarlet Fever. — An outbreak in Winthrop which started in February with 10 scattered cases increased in severity, resulting in 30 cases during the month in four schools. The local board appointed two nurses to inspect the pupils daily under the medical supervision of the board, which resulted in a decrease in the number of cases reported, thus proving once again the value of medical inspection of school children.

Measles. — Under the present system of combating this disease it continues to spread in communities in spite of all attempts of the health officers to control it. A small outbreak appeared in Williamstown, confined chiefly to the college. The first case appears to have been a student who returned from New York and showed symptoms of the disease about eight days later. The college authorities took immediate action, and each case was removed to the isolation ward of the infirmary.

In Greenfield measles increased in severity in spite of the activities of the local board of health. Not only Greenfield, but all of the towns along the Deerfield River valley have suffered from the effects of the disease during the last three months, Colrain, Buckland, Shelburne and Charlemont all having many more cases than they normally had in the past years. In one or two of the towns there had been no epidemic of measles for over fifteen years, which may account for the large number of cases reported from this section of the State. The epidemic in Fall River continued, 271 cases being reported for the month.

Whooping Cough. — In Worcester, during the first three months of the year, apparently from 30 to over 100 per cent. of the cases were fatal. This was due, of course, to the nonreporting of cases. In instances where the local board of health is aware that physicians are not called to attend children sick with the disease, the board should call public attention, through the press or otherwise, to the fact that the law requires householders to report cases of communicable disease to local boards of health.

Enteritis. — An outbreak of 125 cases of acute intestinal disturbance occurred at Wheaton College in Norton among those assembled at a conference consisting of students and visitors. This disturbance, accompanied by slight vomiting and mild diarrhœa, occurred about six hours after the victims had partaken of a late lunch. No serious effects resulted, but the experience calls attention to the necessity of a closer supervision of food supplies in schools, colleges and institutions generally.

Rubella and Parotitis. — Outbreaks of German measles and mumps are at present widespread throughout the State. There were 1,183 cases of mumps and 541 cases of rubella reported during March, but fortunately the diseases were of a mild type and the fatality, as usual, was very low.

RARE DISEASES.

Anterior poliomyelitis was reported as follows: Beverly, 1; Boston, 2; Bridgewater, 1; Lowell, 1; Newton, 1; Whitman, 1; Woburn, 1.

Anthrax was reported as follows: Boston, 2; Saugus, 1; Woburn, 1.

Cerebrospinal meningitis was reported as follows: Beverly, 1; Boston, 7; Fall River, 1; Lowell, 1; Lynn, 1; Norton, 1; Peabody, 1; Pittsfield, 2; Swansea, 1.

Dog bite was reported as follows: Lawrence, 2; Lowell, 1; Pittsfield, 1.

Dysentery was reported as follows: Boston, 2.

Malaria was reported as follows: Boston, 1; Douglas, 1; Fall River, 1; Framingham, 1; Somerville, 1.

Pellagra was reported as follows: Lowell, 1.

Septic sore throat was reported as follows: Amherst, 1; Boston, 8; Brockton, 1; Brookline, 4; Cambridge, 1; Chelsea, 1; Framingham, 1; Holyoke, 1; Milton, 1; Newburyport, 2; Newton, 8; Pelham, 1.

Smallpox was reported as follows: Worcester, 5.

Trachoma was reported as follows: Boston, 2; Fitchburg, 1; Taunton, 1; Worcester, 2.

Trichinosis was reported as follows: North Adams, 1.

DISTRIBUTION.

All Communicable Diseases.

	February, 1917.	March, 1917.	March, 1916.
Total cases, ...	6,415	8,480	7,853
Case rate per 100,000 population, . .	170.0	220.0	208.0

Certain Prevalent Diseases.

	February, 1917.	March, 1917.	March, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[1]		
Diphtheria: — Total cases, ... Case rate per 100,000 population, .	 782 20.7	 859 22.3	 692 18.3	Dennis, . . . Cambridge, . . Walpole, . . Danvers, . . Everett, . . . Haverhill, . . Lynn, . . . Lowell, . . . Watertown, . . Gardner, . . Chicopee, . . Springfield, . .	(0) (30) (1) (2) (4) (8) (7) (17) (1) (3) (2) (15)	4 48 7 9 19 46 17 37 15 17 11 41

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

Certain Prevalent Diseases — Concluded.

	February, 1917.	March, 1917.	March, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.		
				Fall River,	(16)	271
				Oak Bluffs,	(0)	6
				Somerset,	(0)	7
				Swansea,	(0)	6
				Cambridge,	(129)	191
				Milton,	(4)	37
				Sharon,	(1)	30
				Everett,	(11)	28
				Melrose,	(20)	46
				Merrimac,	(0)	66
				Newburyport,	(2)	96
				Salisbury,	(0)	6
				Winthrop,	(6)	26
Measles: —				Andover,	(2)	14
Total cases,	2,193	2,857	3,399	Lexington,	(3)	34
Case rate per 100,000 population,	58.0	74.1	89.8	Watertown,	(9)	29
				Framingham,	(14)	35
				Newton,	(50)	124
				Northbridge,	(3)	20
				Clinton,	(3)	37
				Lancaster,	(1)	17
				Templeton,	(0)	16
				Chesterfield,	(0)	10
				Easthampton,	(3)	21
				Monson,	(3)	21
				Northampton,	(9)	39
				Buckland,	(0)	26
				Greenfield,	(1)	217
				Shelburne,	(0)	20
Scarlet fever: —				Winthrop,	(4)	30
Total cases,	597	721	879	Westfield,	(2)	15
Case rate per 100,000 population,	15.8	18.7	23.2	Bernardston,	(0)	5
Typhoid fever: —						
Total cases,	45	69	55	Newton,	(1)	4
Case rate per 100,000 population,	1.2	1.8	1.5	Worcester,	(2)	6
Whooping cough: —				Lynn,	(6)	31
Total cases,	181	295	1,026	Salem,	(4)	44
Case rate per 100,000 population,	4.8	7.7	27.2	Clinton,	(1)	10
				Colrain,	(0)	25
Tuberculosis, pulmonary: —						
Total cases,	662	715	702			
Case rate per 100,000 population,	17.5	18.6	18.6			
Tuberculosis, other forms: —						
Total cases,	71	68	57			
Case rate per 100,000 population,	1.9	1.8	1.5			

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	Occupation.	Locality.	Sex.	Age.	Color.
Aniline oil,	Rubber mixer,	Chicopee,	M	36	W
Anthrax,	Longshoreman,	Boston,	M	45	W
Anthrax	Tanner,	Woburn,	M	43	W
Carbon disulphide,	Rubber worker,	Boston,	M	21	W
Creosote or carbolic acid,	Longshoreman,	Boston,	M	33	W
Lead poisoning,	Painter,	Boston,	M	39	W
Lead poisoning,	Painter,	Boston,	M	24	W
Lead poisoning,	Painter,	Boston,	M	35	W
Lead poisoning,	Painter,	Boston,	M	25	W
Lead poisoning,	Painter,	Boston,	M	32	W
Lead poisoning,	Painter,	Boston,	M	33	W
Lead poisoning,	Painter,	Boston,	M	65	W
Lead poisoning,	Painter,	Boston,	M	38	W
Lead poisoning,	Painter,	Boston,	M	34	W
Lead poisoning,	Painter,	Boston,	M	33	W
Lead poisoning,	Painter,	Woburn,	M	40	W
Lead poisoning,	Painter,	Lincoln,	M	46	W
Lead poisoning,	Painter,	Scituate,	M	46	W
Lead poisoning,	Painter,	Springfield,	M	27	W
Lead poisoning,	Packer,	Boston,	M	40	W
Lead poisoning,	Tinsmith,	Cambridge,	M	35	W
Lead poisoning,	Ship builder,	Boston,	M	29	W
Lead poisoning,	Ship builder,	Quincy,	M	25	W
Lead poisoning,	Truckman,	Reading,	M	50	W
Lead poisoning,	Riveter,	Quincy,	M	35	W
Lead poisoning,	Rubber mixer,	Stoughton,	M	48	W
Lead poisoning,	Electric operator,	Boston,	M	40	W
Lead poisoning,	Manufacturing lead pipes,	Boston,	M	38	W
Lead poisoning,	Manufacturing lead pipes,	Boston,	M	36	W
Lead poisoning,	Manufacturing lead pipes,	Boston,	M	40	W
Lead poisoning,	Manufacturing lead pipes,	Boston,	M	25	W
Wood alcohol,	Mica mixer,	Newton,	M	24	W

CASES AND DEATHS[1] FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	2	3	791	2	782	75	173	–	2,193	31	689	–
2	Cities over 200,000.													
3	Boston,	778,500	1	–	271	1	231	24	24	–	460	2	185	–
4	Cities, 150,000–200,000.													
5	Worcester,	170,077	–	1	5	–	24	2	1	–	14	–	9	–
6	Cities, 100,000–150,000.	*570,968*	–	–	*126*	–	*161*	*18*	*74*	–	*612*	*21*	*59*	–
7	Fall River,	127,218	–	–	18	–	17	1	5	–	370	18	2	–
8	New Bedford,	115,272	–	–	37	–	4	1	58	–	81	–	17	–
9	Cambridge,	110,582	–	–	45	–	62	2	6	–	70	3	34	–
10	Springfield,	109,174	–	–	21	–	37	8	5	–	14	–	2	–
11	Lowell,	108,722	–	–	5	–	41	6	–	–	77	–	4	–
12	Cities, 50,000–100,000.	*511,498*	–	–	*86*	–	*99*	*13*	*9*	–	*70*	*1*	*47*	–
13	Lynn,	98,659	–	–	20	–	12	4	2	–	5	–	6	–
14	Lawrence,	92,187	–	–	16	–	13	1	–	–	7	–	2	–
15	Somerville,	91,102	–	–	8	–	27	4	–	–	17	1	2	–
16	Brockton,	64,668	–	–	19	–	8	–	1	–	3	–	24	–
17	Holyoke,	62,179	–	–	4	–	9	2	5	–	5	–	–	–
18	Haverhill,	51,806	–	–	6	–	16	2	–	–	24	–	1	–
19	Malden,	50,897	–	–	13	–	14	–	1	–	9	–	12	–
20	Cities and Towns, 25,000–50,000.	*498,330*	–	*1*	*115*	–	*82*	*5*	*17*	–	*175*	–	*100*	–
21	Chelsea,	48,273	–	–	22	–	6	–	–	–	1	–	4	–
22	Newton,	44,573	–	–	9	–	2	–	–	–	67	–	40	–
23	Quincy,	44,221	–	1	10	–	8	–	2	–	13	–	22	–
24	Pittsfield,	42,913	–	–	4	–	3	–	–	–	1	–	–	–
25	Fitchburg,	40,464	–	–	17	–	13	3	–	–	2	–	3	–
26	Salem,	39,872	–	–	28	–	6	–	–	–	3	–	3	–
27	Everett,	39,588	–	–	4	–	11	1	–	–	2	–	1	–
28	Taunton,	37,001	–	–	3	–	5	–	–	–	1	–	–	–
29	Brookline,	36,007	–	–	13	–	5	–	1	–	7	–	11	–
30	Medford,	33,758	–	–	1	–	3	–	6	–	75	–	–	–
31	Chicopee,	32,230	–	–	–	–	6	1	8	–	–	–	–	–
32	Waltham,	31,179	–	–	4	–	5	–	–	–	3	–	16	–
33	Revere,	28,251	–	–	–	–	9	–	–	–	–	–	–	–
34	Cities and Towns, 10,000–25,000.	*569,407*	*1*	*1*	*79*	–	*111*	*6*	*4*	–	*363*	*3*	*151*	–
35	Beverly,	24,863	1	1	6	–	–	–	–	–	–	–	–	–
36	Gloucester,	24,513	–	–	–	–	–	–	–	–	–	–	–	–
37	Northampton,	22,636	–	–	–	–	–	–	–	–	28	–	20	–
38	North Adams,	22,042	–	–	1	–	3	–	–	–	1	1	–	–
39	Peabody,	19,908	–	–	7	–	–	–	–	–	1	–	–	–
40	Attleboro,	19,480	–	–	5	–	1	–	–	–	–	–	–	–
41	Westfield,	19,456	–	–	–	–	3	–	–	–	–	–	1	–
42	Watertown,	18,123	–	–	1	–	8	–	–	–	15	–	14	–
43	Leominster,	17,675	–	–	7	–	16	3	–	–	3	–	4	–
44	Melrose,	17,394	–	–	–	–	1	–	–	–	100	1	–	–
45	Framingham,	17,146	–	–	1	–	–	–	1	–	40	–	81	–
46	Gardner,	17,116	–	–	2	–	29	1	–	–	3	–	4	–
47	Woburn,	16,896	–	–	–	–	1	–	–	–	–	–	–	–
48	Arlington,	16,524	–	–	2	–	1	–	–	–	28	–	–	–
49	Marlborough,	15,546	–	–	2	–	–	–	–	–	–	–	–	–
50	Newburyport,	15,470	–	–	3	–	3	–	–	–	22	–	2	–
51	Methuen,	15,137	–	–	2	–	4	–	–	–	–	–	–	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and

TO THE PUBLIC HEALTH, FEBRUARY, 1917.

38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		176A Dog Bite.		100 Septic Sore Throat.		5 Small-pox.		75A Trachoma.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
192	–	597	19	661	394	71	75	45	9	181	26	9	5	3	–	16	10	2	–	3	–	1
																						2
71	–	117	8	225	81	20	15	6	–	8	1	3	1	–	–	7	6	1	–	1	–	3
																						4
22	–	58	–	20	17	5	8	1	–	5	8	–	–	1	–	–	–	–	–	–	–	5
37	–	*70*	*2*	*140*	*69*	*14*	*15*	*11*	*4*	*32*	*6*	*3*	*1*	–	–	*4*	*2*	–	–	–	–	6
6	–	6	1	53	17	5	6	3	–	24	3	1	–	–	–	1	–	–	–	–	–	7
13	–	11	1	32	16	1	3	4	1	5	2	1	1	–	–	1	–	–	–	–	–	8
5	–	20	–	23	18	5	–	2	–	–	–	–	–	–	–	2	–	–	–	–	–	9
9	–	26	–	15	5	3	4	–	–	3	–	–	–	–	–	–	–	–	–	–	–	10
4	–	7	–	17	13	–	2	2	3	–	1	1	–	–	–	–	2	–	–	–	–	11
21	–	*81*	*4*	*66*	*44*	*5*	*9*	*3*	*1*	*27*	*1*	*1*	*1*	–	–	–	–	–	–	*1*	–	12
5	–	19	1	17	9	1	3	1	1	1	–	1	1	–	–	–	–	–	–	–	–	13
–	–	7	1	11	10	1	3	1	–	13	–	–	–	–	–	–	–	–	–	1	–	14
1	–	15	1	8	7	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	15
7	–	8	–	8	4	1	1	–	–	8	1	–	–	–	–	–	–	–	–	–	–	16
1	–	15	–	10	7	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17
4	–	5	1	8	4	1	1	–	–	5	–	–	–	–	–	–	–	–	–	–	–	18
3	–	12	–	4	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19
23	–	*52*	–	*82*	*38*	*12*	*12*	*4*	*1*	*61*	*4*	–	–	–	–	*2*	*1*	–	–	–	–	20
5	–	1	–	9	5	3	1	–	1	3	–	–	–	–	–	1	–	–	–	–	–	21
4	–	3	–	4	1	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	22
2	–	3	–	6	4	2	1	1	–	3	1	–	–	–	–	–	–	–	–	–	–	23
2	–	1	–	6	2	–	2	–	–	3	2	–	–	–	–	–	–	–	–	–	–	24
2	–	6	–	10	2	–	–	–	–	6	1	–	–	–	–	–	–	–	–	–	–	25
1	–	3	–	8	3	2	2	–	–	16	–	–	–	–	–	–	–	–	–	–	–	26
2	–	8	–	6	3	1	–	1	–	3	–	–	–	–	–	–	–	–	–	–	–	27
1	–	4	–	7	8	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	28
2	–	2	–	4	2	1	1	1	–	1	–	–	–	–	–	–	1	–	–	–	–	29
–	–	1	–	5	1	–	–	–	–	4	–	–	–	–	–	1	–	–	–	–	–	30
2	–	10	–	11	3	–	1	–	–	5	–	–	–	–	–	–	–	–	–	–	–	31
–	–	2	–	2	1	–	1	–	–	16	–	–	–	–	–	–	–	–	–	–	–	32
–	–	8	–	4	3	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	33
7	–	*124*	*4*	*52*	*48*	*7*	*8*	*9*	*2*	*25*	*3*	*2*	*2*	–	–	*2*	*1*	–	–	–	–	34
–	–	5	–	–	1	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	35
–	–	–	–	6	4	5	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	36
–	–	6	–	4	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	37
–	–	4	–	3	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	38
1	–	3	–	5	2	–	–	1	1	8	–	–	–	–	–	–	–	–	–	–	–	39
1	–	4	–	3	2	1	1	–	–	–	–	–	–	1	–	–	–	–	–	–	–	40
–	–	18	1	1	6	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41
–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	42
–	–	–	–	2	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	43
1	–	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	44
–	–	5	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	45
1	–	7	–	2	4	–	–	3	1	–	–	–	–	–	–	1	–	–	–	–	–	46
–	–	5	–	4	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	47
–	–	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	48
–	–	3	–	2	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	49
–	–	2	–	–	–	–	–	1	–	2	–	–	–	–	–	1	–	–	–	–	–	50
–	–	1	–	2	2	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	51

correction the deaths given above, while approximately correct, are not absolutely complete.

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,930	–	–	–	–	1	–	–	–	–	–	–	–
53	Weymouth,	14,444	–	–	–	–	–	–	–	–	5	–	–	–
54	Milford,	13,962	–	–	–	–	2	–	–	–	–	–	–	–
55	Winthrop,	13,918	–	–	1	–	–	–	1	–	5	–	4	–
56	Greenfield,	13,590	–	–	9	–	–	–	–	–	79	1	–	–
57	Wakefield,	13,389	–	–	–	–	–	–	–	–	1	–	–	–
58	Adams,	13,302	–	–	–	–	3	–	–	–	–	–	–	–
59	Plymouth,	13,273	–	–	1	–	2	–	–	–	–	–	–	–
60	Clinton,	13,243	–	–	4	–	–	–	–	–	20	–	–	–
61	Webster,	13,031	–	–	15	–	17	1	–	–	–	–	–	–
62	Norwood,	12,286	–	–	1	–	7	–	–	–	1	–	2	–
63	West Springfield,	12,273	–	–	–	–	4	–	–	–	1	–	–	–
64	Danvers,	11,955	–	–	3	–	–	–	–	–	–	–	–	–
65	Dedham,	11,820	–	–	–	–	2	1	–	–	1	–	–	–
66	Natick,	11,673	–	–	6	–	2	–	–	–	–	–	13	–
67	Saugus,	11,189	–	–	–	–	–	–	–	–	–	–	–	–
68	Easthampton,	10,430	–	–	–	–	–	–	–	–	7	–	–	–
69	Athol,	10,333	–	–	–	–	–	–	–	–	–	–	–	–
70	Winchester,	10,312	–	–	–	–	–	–	2	–	2	–	–	–
71	Bridgewater,	10,129	–	–	–	–	1	–	–	–	–	–	6	–
72	TOWNS, 5,000–10,000.	*355,823*	–	–	*73*	*1*	*39*	*1*	*19*	–	*229*	–	*75*	–
73	TOWNS, 2,500–5,000.	*181,232*	–	–	*25*	–	*14*	*2*	*22*	–	*132*	*2*	*34*	–
74	TOWNS UNDER 2,500.	*213,171*	–	–	*11*	–	*15*	*1*	*3*	–	*138*	*2*	*28*	–
75	STATE INFIRMARY,	–	–	–	–	–	6	3	–	–	–	–	1	–

In addition to the above there occurred 1 case of dysentery in Boston; 2 cases of malaria, 1 in Amherst and 1 in Boston; 1 death from pellagra in Taunton; 2 cases of tetanus, 1 in Lawrence and 1 in Malden, and 3 deaths, 1 in Lawrence, 1 in Malden and 1 in Waltham; and 1 case of trichinosis in Boston.

TO THE PUBLIC HEALTH — *Concluded.*

38A		7		28		29-35		1		8		61A		176A		100		5		75A		
Ophthalmia Neonatorum.		Scarlet Fever.		Tuberculosis, Pulmonary.		Tuberculosis, Other Forms.		Typhoid Fever.		Whooping Cough.		Cerebrospinal Meningitis.		Dog Bite.		Septic Sore Throat.		Smallpox.		Trachoma.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	1	–	1	–	–	**1**	–	–	–	**1**	–	**1**	–	–	–	–	–	–	–	–	52
–	–	–	–	–	**1**	–	**1**	1	–	–	–	–	–	–	–	–	–	–	–	–	–	53
–	–	2	–	3	**3**	–	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	54
–	–	10	–	–	**2**	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	55
–	–	7	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	56
–	–	5	**1**	–	–	–	–	–	–	3	–	–	–	–	–	–	–	–	–	–	–	57
1	–	4	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	58
–	–	2	–	1	**1**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	59
–	–	–	–	–	**1**	–	–	–	–	6	–	–	–	–	–	–	**1**	–	–	–	–	60
1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	61
–	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	62
1	–	1	–	2	**2**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	63
–	–	2	–	1	**3**	–	**1**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	64
–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	65
–	–	5	–	1	**1**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	66
–	–	–	–	–	**1**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	67
–	–	3	–	–	**1**	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	68
–	–	2	**1**	–	–	–	–	–	–	–	**1**	–	–	–	–	–	–	–	–	–	–	69
–	–	–	–	–	**1**	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	70
–	–	1	–	1	**1**	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	71
8	–	*64*	–	*21*	*26*	*1*	*4*	*6*	–	*11*	*2*	–	–	–	–	*1*	–	–	–	*1*	–	72
2	–	*15*	*1*	*6*	*19*	*6*	–	*2*	*1*	–	*1*	–	–	*1*	–	–	–	–	–	–	–	73
1	–	*16*	–	*11*	*32*	*1*	*2*	*2*	–	*12*	–	–	–	–	–	–	–	*1*	–	–	–	74
–	–	–	–	38	20	–	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	75

NOTE. — Through an error in the January table one death from anterior poliomyelitis was incorrectly charged against Newton.

LABORATORY AIDS FOR DIAGNOSIS AND TREATMENT OF COMMUNICABLE DISEASES.

The State Department of Health maintains, as a part of its regular work, bacteriological and biological laboratories to aid in the control and prevention of communicable diseases. The facilities of these laboratories and certain supplies furnished by them are available to physicians for the free use of residents of the Commonwealth. Upon requisition these supplies are sent to local boards of health, from whom physicians may obtain them as required.

The following supplies are available: —

Diphtheria antitoxin, 3 sizes: 3,000, 1,500 and 750 units.
Antityphoid vaccine (3 ampoules in each set).
Smallpox vaccine.
Antimeningitis serum.
Antirabic treatment (secured by special arrangement in each case through District Health Officers).
Outfits for diphtheria cultures.
Outfits for Widal tests (typhoid fever).
Outfits for culture tests (typhoid fever).
Schick tests for determining diphtheria immunity (material on application to District Health Officers).
Outfits for prevention of ophthalmia (silver nitrate in wax ampoules).
Outfits for sputum.

The following examinations are made for diagnosis at the laboratories, the specimens being sent to the laboratories by the physicians in attendance: —

At Bacteriological Laboratory, Room 527, State House: —

Culture test for typhoid, blood (of value only in first five days).
Widal test for typhoid, blood (rarely positive before fifth day).
Culture test for typhoid, stools, urine (probable carrier cases chiefly).
Sputum for tubercle bacilli (consumption).
Pus smears for gonococci.
Blood smears for malaria.
Throat and nose cultures for diphtheria.

At Wassermann Laboratory, Harvard Medical School, Longwood Avenue, Boston, Wassermann test for syphilis: —

Specimens are received in Wassermann Laboratory when submitted by direction of the District Health Officers or local boards of health. Patients are also bled at the laboratory on Tuesdays and Thursdays from 3 to 5 P.M. There is no charge for this class of work.

In addition to the above work examinations are made for rabies, glanders and anthrax for the Department of Animal Industry. Specimens to receive attention must be submitted through direction of the Department of Animal Industry.

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PUBLIC HEALTH BULLETIN

ISSUED MONTHLY
BY THE
STATE DEPARTMENT OF HEALTH
OF MASSACHUSETTS

MAY, 1917

Vol. 4, No. 5

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass.,
under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

INFANTILE PARALYSIS.

THE following statements regarding infantile paralysis, while not wholly proven in every particular, represent the opinions of men who are most closely connected with the study of this disease.

Upon these opinions the State Department of Health recommends that local boards of health take the same precautions in cases of infantile paralysis as are customary in cases of other communicable diseases, such as diphtheria and typhoid fever, — the isolation of the patient and attendant in screened quarters, free from unnecessary hangings and furnishings; the destruction or thorough disinfection of all discharges and excretions. In recent suggestions for minimum rules in communicable diseases the Department recommends that the maximum incubation period in infantile paralysis be considered as fourteen days, and that the minimum period of isolation be twenty-eight days.

All cases should be promptly reported. Early knowledge of suspicious cases is highly desirable, and a thorough investigation should be made in all cases. These measures carefully followed in the early cases in each community afford the best known prospect of restricting the spread of the disease.

In co-operation with the State Department of Health, and acting as its agent, the Harvard Infantile Paralysis Commission is conducting free clinics in Boston and at central points throughout the State for consultation and suggestions as to the after-care of cases of infantile paralysis. Aside from this the commission is conducting research work, and offers facilities and aid in establishing early diagnosis.

Infantile paralysis is an "infectious" disease. In many communities, such as Massachusetts, it is more or less constantly present. During the winter months the number of new cases is small, but with the coming of warm weather the disease becomes more prevalent and, occasionally, under conditions which are not well understood, it appears in actual epidemic form. Such an epidemic was experienced in this State in the summer of 1916, and, on the basis of our knowledge of the natural history of infantile paralysis, it will be wise for us to look forward to the possible recurrence of the outbreak during the present year.

The cause of infantile paralysis has been shown to be a very small micro-organism or so-called "ultramicroscopic" virus. The virus is constantly present in the brain and spinal cord of all fatal cases, and by the inoculation of small bits of these tissues a condition exactly simulating infantile paralysis in human beings may be produced in monkeys. Other animals seldom show the characteristic symptoms and lesions of the disease after experimental inoculation. Besides being present in the nervous tissues in fatal cases the virus has been found on the mucous membranes of the nose and throat of patients acutely sick with the disease, of some convalescent patients, and even in a few healthy persons who have been in close contact with cases of the disease, but who have themselves shown no manifestations of sickness. These latter are known as "carriers." It has therefore been assumed that the virus is much more widely distributed in the community than is indicated by the number of clinical cases.

The method of spread of the disease is not accurately known. Certain facts suggest that direct contact with acute cases or with healthy carriers may account for infection, while other evidence suggests that insects play a rôle in the transmission. Other theories as to the mode of spread have been advanced, such as infection through milk and other foods. There is experimental evidence that discharges from the bowels may contain the virus, and are therefore a possible source of danger in spreading the infection. It is therefore proper to take sanitary precautions against the possibility of all these methods of spread. This involves the quarantining of sick persons and of contacts in properly screened quarters, and the disinfection of discharges from the nose, mouth, intestine, etc. It is assumed that the disease is not usually contagious after the first four weeks except in those who may remain as "carriers" of the infection. The incubation period, or the interval after exposure before an infected person shows signs of being sick, is generally regarded as being not over two weeks in most cases. This is therefore the length of time during which persons who have been in contact with the disease should be isolated.

Infantile paralysis, especially during an epidemic, is a much more common disease than is generally recognized. Statistics in the past have been almost wholly based on the number of cases that have shown paralysis, but recent investigations indicate that there are at least as many more cases in which paralysis never occurs. The recognition of these milder cases without paralysis is extremely important because they may be a more significant element in the spread of the disease than the paralyzed cases. Instances of the mild, non-paralytic type of the disease are often referred to as "missed" or "abortive" cases. It is very difficult to make the diagnosis of infantile paralysis in the absence of paralysis. The disease frequently begins suddenly with malaise, fever and vomiting. The children are listless, irritable and show a distinct desire to be left alone. They do not want to be picked up and fondled, since all movements, and especially those which bend the spine, are painful. Except to the most experienced there are few symptoms which are particularly suggestive, and therefore if infantile paralysis is prevalent all children who are even trivially indisposed should be seen by a doctor. A reasonably definite diagnosis of infantile paralysis, during the early stage of the disease, can usually be made by means of the examination of the spinal fluid. The spinal fluid can be obtained by means of lumbar puncture, which is a process requiring some technical skill, and should be attempted only by a specially trained physician. After the onset of paralysis the diagnosis is usually comparatively simple.

According to the statistics of past epidemics the mortality of infantile paralysis varies between 10 and 20 per cent. of those who become paralyzed. Many of the paralyzed cases are only slightly affected, and make a rapid and complete recovery. A large proportion improve more slowly, and, although not recovering entirely, are able to carry on a comparatively normal life. Only a very small group of patients remains seriously crippled, provided the best methods of treatment are utilized.

While infantile paralysis in its severe form is a grave affliction it should be remembered that not more than one-half the persons who are infected with the disease ever show any signs of paralysis at all. It is therefore evident that infantile paralysis is not so overwhelming a menace to the individual or to the community as it is popularly supposed to be.

In the care of infantile paralysis the measures for quarantine already referred to are of primary importance in order that the spread of the disease may be limited as much as possible. Absolute rest and the prevention of contractures or deformities are essential during the acute stage of the disease. There is evidence in favor of the fact that lumbar puncture and the administration of immune serum may be useful in the earliest stage, but drugs and patent medicines have not been shown to have any value. For the best results in the individual patient, and for the protection of the community, the acute cases should be cared for in a hospital, if removal may be safely undertaken. The after-treatment of the paralyses, which may require prolonged and skillful treatment, can be well carried out under proper medical supervision in the home.

Since the foregoing article was written, at the Thirty-second Conference of State and Provincial Boards of Health, held in Washington, the following committee report on infantile paralysis was unanimously adopted. At this meeting more than forty States and territories were represented.

There is a noticeable tendency toward shortening the period of isolation, in that three weeks from the onset of the disease is given as the duration of such period, which is somewhat shorter than the period of four weeks recently suggested by the Department, and much shorter than the earlier periods of six and eight weeks formerly recommended by others. This change is based on a growing belief that the infection is chiefly transmissible before or during the acute stage of the disease.

Report of Committee on Method for Control of Poliomyelitis.

Your committee has had the opportunity of examining the epidemiological data prepared in Massachusetts, New York, New Jersey and Minnesota, and the winter epidemic in West Virginia, during the year 1916–17. Former statements relative to incubation period of poliomyelitis are confirmed, viz.: four to fourteen days, but commonly seven days. The opinion is also strengthened that this disease is widely prevalent, and is generally of the non-paralytic type. The opinion is also strengthened that the infectious agent is transmitted chiefly by contact with a patient or carrier; however, the exact incident of such contact is often difficult to determine on account of unrecognized forms of the disease. Your committee offers the following suggestions — minimum requirements — for the control of poliomyelitis: —

Isolation.

Isolation is a useful measure for limiting the spread of this disease. It is often, however, without demonstrable effect because of the general prevalence of unrecognized cases and carriers.

Because of (*a*) the numerous instances where diagnosis is not made until late, so that the patient is not isolated for several weeks after the date of onset and yet no apparent secondary cases appear.

(*b*) The fact that the longest period observed where a primary case was apparently the source of infection is only ten days.

(*c*) Epidemiological experience does not justify a long period of isolation.

(*d*) Of the satisfactory experience in at least one city and one State with the use of a two weeks' period of isolation for all known cases of poliomyelitis over a period of years, your committee recommends —

First. — That an isolation period for a patient of not less than two weeks nor more than three weeks from onset be required unless the temperature has not returned to normal in the meantime.

Second. — That children of the same household in contact with a patient be restricted from places of public assembly for a period of fourteen days from last date of contact, as determined by the health officer.

Third. — That an adult of the household, if the patient is properly isolated, may continue his vocation, provided it does not bring him into contact with children at any time.

Disinfection.

Your committee recommends that, first, the discharges from the nose, throat and bowels of the patient be disinfected promptly; second, the caretaker shall wash her hands with soap and hot water promptly after handling said discharges; third, the caretaker shall wash her hands similarly before leaving the room occupied by the patient; fourth, isolation shall be terminated by a thorough washing of entire body and hair of the patient, and the room cleaned with soap and hot water, aired and sunned; fifth, sick-room precautions should include the usual attention to cleaning and disinfection of eating utensils, personal and bed clothing, rugs, door knobs and other things handled by the patient or caretaker.

Precautions for Physicians and Nurses.

The committee recommends that unless a special covering and gloves be worn (*a*) the physician and nurse shall so handle the patient that discharges shall not soil their clothing, special care being taken to prevent droplet infection; (*b*) the physician and nurse shall thoroughly wash their hands before leaving the premises.

Hospitalization.

The committee approves the removal to hospitals of patients affected with poliomyelitis when proper isolation and satisfactory care for the patient cannot be secured in the home; but the committee believes that during the early stage of the disease the patient needs rest in bed, and transfer to a hospital may be detrimental to his welfare.

Other Suggested Measures designed to control the Disease.

(*a*) The committee does not recommend the use of travel certificates, but travel and contact with children should be discouraged.

(*b*) Surveillance for persons coming from infected districts, in the opinion of your committee, is not necessary, unless the person has been definitely exposed to infection.

(*c*) The most effective agency in the control of this disease is the employment of public health nurses, who, in co-operation with the physician, will teach sick-room precautions, the necessity for rest in bed, and the need of proper support for affected parts.

(*d*) Expert diagnosticians should be provided and the use of lumbar puncture urged.

(*e*) Food, especially such as is consumed uncooked, should be considered as a possible means of transferring the infectious agent, and appropriate measures should be instituted to protect the public during an outbreak.

(*f*) Where poliomyelitis occurs in a school, your committee advises that the school be not closed, but that daily medical supervision be instituted.

(*g*) Efficient screening and the use of approved insecticides should be employed so that insects shall not have access to the patient or his excretions.

(*h*) Household pets should be excluded from the sick room.

(*i*) In the presence of poliomyelitis a search for, and a careful examination of, all ill children should be made. All children having fever should be isolated pending the diagnosis.

(*j*) Prompt reporting of all recognized or suspected cases, personally or by telegraph or by telephone, is essential, in addition to the written report required by law.

(*k*) Weekly reports by State and territorial health authorities should be made to the United States Public Health Service.

Respectfully submitted,

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Irving A. Watson.
A. J. Chesley.
S. L. Jepson.
J. P. Leake, U. S. P. H. S.
David N. Roberg.
F. M. Meader, *Chairman.*

HEALTH DEPARTMENTS AND THE ALCOHOL QUESTION.

RECENTLY Dr. Haven Emerson, Commissioner of Health of the city of New York, has twice come to Boston, first, to address a meeting called by the alcohol committee of the Associated Charities, and later, a group of doctors and their wives, in regard to the effects of alcoholic drink on the health of the community. The information given by Dr. Emerson and the opinions expressed by the doctors present as to the part played by alcohol as a cause of sickness and death seem to demand that the Departments of Health should give out such information on the subject as they possess, especially the results of the more recent scientific inquiries.

Health departments are not called on to discuss the use of alcohol from a moral or religious point of view, but in so far as it affects the health of individuals and of society at large, the community has a right to expect the doctors and the health departments to give the facts, together with sound and reliable opinions; to tell the truth, the whole truth and nothing but the truth.

It is quite as important that the public should be correctly informed as to the effects of alcohol as it is that they should know the facts about tuberculosis and syphilis.

The amount of alcohol in patent medicines should be generally known.

We know now that alcohol is not a stimulant, but is a depressant; that its excessive use frequently causes insanity; that used even in moderation it more or less impairs the nervous system so that impressions are less clear and actions less accurate, thus causing innumerable accidents to the individuals and other innocent persons.

Alcohol causes damage to the heart, kidneys and blood vessels, as well as to the stomach and liver. Owing to its effect on the germ plasma it often damages the unborn babe. It reduces the resistance to bacterial infection, thus rendering individuals more susceptible to tuberculosis and other infections. Regular drinkers have a decidedly smaller chance of recovering from pneumonia. These subjects may be taken up more in detail in later numbers of the Bulletin.

The more we know about disease the more clearly we see that preventive medicine is most important for human welfare; for suppose a part of the body has been impaired or destroyed by syphilis or alcohol, — such destruction might have been prevented, but usually cannot be repaired.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of April, 1917, samples were collected in 35 cities and towns.

There were 617 samples of milk examined, of which 207 were below the legal standard, 12 samples were skimmed milk not properly labeled, 17 samples contained added water, and 2 samples contained foreign matter.

There were 139 samples of food examined, of which the following were adulterated: 2 samples of buttermilk containing added water; 8 samples of canned peas which had been made from dried peas soaked before canning, and the cans not so labeled; 1 sample of canned lima beans which were soaked, and the can not so labeled; 2 samples of cream below the legal standard; 9 samples of decomposed eggs; 6 samples of maple sugar containing cane sugar; 1 sample of Hamburg steak containing sulphites and not so labeled; 2 samples of sausage containing starch in excess of 2 per cent.; and 3 samples of vinegar low in acid.

There were 84 drugs examined, of which 30 were adulterated. These consisted of 13 samples of alcohol not up to the professed standard under which they were sold, camphorated oil, spirit of anise, spirit of camphor, spirit of nitrous ether and spirit of peppermint, somewhat deficient in the active ingredient.

There were 16 convictions for violation of the laws, $340 in fines being imposed. Thomas McEneney of Arlington and Emery C. Willard of Ashby were convicted for violation of the milk laws. Samuel Gelt, David Melnick and Herman Scholz of Lawrence, Louis Miller Harry Epstein, Ralph Dondero, Abram Gunsenhiser and Philip Rounsevell, on two counts, of Boston, Robert Wagner of Fitchburg, and Frederick W. Shakelford of Gloucester were convicted for violation of the food laws. Ralph Dondero appealed his case. Orlandi A. Carpenter of Boston and Gardner Shattuck of Everett were convicted for violation of the drug laws, and both appealed their cases. Samuel Gelt of Lawrence was convicted for violation of the cold-storage laws.

There were 5 confiscations made, consisting of 834 pounds of decomposed salt hake, 14 pounds of decomposed fowl, 20½ pounds of decomposed chicken, 50 pounds of decomposed veal, and 395 pounds of pork (septicæmia).

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

Four samples of milk containing added water, produced by W. E. Nutting of East Jaffrey, N. H.; 3 samples of milk containing added water, from Benjamin Mendelson of Malden; 1 sample of skimmed milk not properly labeled, from H. Wallace Lane of Gloucester; 1 sample of skimmed milk not properly labeled, from the Acton Farms Milk Company of Somerville; 5 samples of milk containing added water and 2 samples of milk containing added water and skimmed, from Emery C. Willard of Ashby; 1 sample of milk containing added water, produced by Thomas McEneney of Arlington; 1 sample of skimmed milk not properly labeled, produced by Michael J. Kelleher of Newburyport; 1 sample of milk containing formaldehyde, produced by Charles S. Bartlett of Newburyport; the following brands of peas which were soaked peas not properly labeled: — 4 samples of "Iona" brand, put up for The Great Atlantic & Pacific Tea Company, Jersey City, N. J.; 1 sample of "Ridge Farm" brand, packed by J. Langrall & Bro., Inc., Baltimore, Md.; 1 sample of "Talbot" brand, put out by Chas. T. Wrightson, Easton, Md.; 1 sample of "Mantik" brand, packed by Mantik Canning Company, Baltimore, Md.; 1 sample of "Gold Cord" brand, packed by Kirkland Canning Company, Utica, N. Y.; 1 sample of "Sinclare" brand lima beans, which were soaked beans not properly labeled, put out by Joseph

Brakeley, Inc., Freehold, N. J.; 1 sample of vinegar which was low in acid, manufactured by the Greater New York Pickle Works, Cambridge, Mass.; 1 sample of pure cider vinegar which was low in acid, manufactured by the Hunter Chemical Company, Springfield, Mass.; and 1 sample of pure cider vinegar which was low in acid, manufactured by S. L. Armstrong, Boston, Mass.

Quarterly Report on Cold Storage.

The licensed cold-storage warehouses report the following amounts of food placed in storage during the months of January, February and March: 738,090 dozens case eggs, 384,521 pounds broken out eggs, 2,428,932 pounds butter, 4,741,538½ pounds poultry, 24,961 pounds game, 14,808,466¾ pounds fresh meat and meat products, and 4,761,660 pounds fresh food fish, making a total of 27,888,169¼ pounds.

There was on hand in storage on April 1, 1917, 134,495 dozens case eggs, 180,344 pounds broken out eggs, and 1,745,448 pounds of butter, making a total of 2,060,287 pounds.

The storage of eggs, butter and poultry has been greater, the storage of meat has been less, and the storage of fish has been substantially the same as during the corresponding period in 1916. The amount of eggs and butter on hand April 1, 1917, is greater than the amount on hand April 1, 1916.

SHORTAGE OF ANTITOXIN BOTTLES.

The following notice recently sent to local boards of health in regard to the shortage of antitoxin bottles is self-explanatory. The work of the Department will be greatly facilitated if all who have empty antitoxin bottles will observe the request given below, and return the same to the antitoxin laboratory or to their local board of health.

Notice!

Owing to war conditions, the State Department of Health finds a growing difficulty in obtaining supplies for the manufacture and distribution of diphtheria antitoxin and vaccine virus. There is, in particular, a shortage of bottles for antitoxin. All physicians throughout the State are therefore urgently requested to search for antitoxin bottles and return them to the Antitoxin and Vaccine Laboratory, Forest Hills, Mass.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF APRIL, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of April, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria,	1,060	93	599	138	230

	Number of Examinations.	Positive.	Negative.	Atypical.
Tuberculosis,	301	68	233	
Typhoid (fever Widal test),	129	41	78	10
Typhoid fever (culture test),	66	3	63	
Malaria,	7	–	7	
Miscellaneous,	90			

Total number of examinations made, 1,653.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR APRIL, 1917.

General Prevalence.

There were 8,662 cases of communicable disease reported for April, which is a slight increase as compared with 8,474 cases for the preceding month. For the corresponding month of 1916, 7,935 cases were reported.

The increase as compared with March is confined to measles, pulmonary tuberculosis and typhoid fever. In comparison with the corresponding month for 1916, the increase occurred in pulmonary tuberculosis, diphtheria and typhoid.

Anterior Poliomyelitis. — There were 9 cases of this disease reported in 8 communities, and a study of these cases shows them to be sporadic, with no common focus.

Anthrax. — This disease is increasing from year to year, especially since the beginning of the war. This has been a result of the scarcity of materials used in making leather, and the collecting of hides from new areas throughout the world. There were 5 cases reported for the month, one of which was a worker in a hair factory while the others handled hides.

Typhoid Fever. — A marked increase in cases occurred during April, 112 cases being reported as compared with 69 cases for March. An epidemic in Gardner accounted for 21 cases, which still leaves a great increase aside from epidemics. The cases, for the most part, were sporadic, but there were many secondary cases which resulted from contact and inefficient disinfection in households.

Diphtheria. — This disease was prevalent in many communities, and while no marked epidemic was present in any community, the following cities have had more than their usual number of cases: Cambridge, Chelsea, Everett, Malden, Medford and Revere. Investigations in most of these cities show that the cases are scattered and are probably due to unrecognized carriers.

Diseases on the Premises of Milk Handlers. — During the month, in three instances, communicable diseases have been reported in the families of milk producers. Scarlet fever occurred in two households and a case of diphtheria in a third. Each case was investigated immediately, and no outbreaks resulted.

OUTBREAKS AND EPIDEMICS.

Smallpox. — Five cases, including one death, were reported for the month, all of which were in Worcester. The cases were confined to adults ranging from twenty to fifty-seven years of age. The patient who died had not been vaccinated.

This disease has been endemic in Worcester for several months. Since the occurrence of the disease chicken pox has also appeared and the possibility of one disease being mistaken for the other by parents is an ever-present danger. The outlook is serious, as the frequency of cases of smallpox is increasing. To offset the danger of an epidemic, thorough measures by the local board of health are necessary to acquaint the public with the proper precautions and the necessity of early reporting of suspicious cases by householders and physicians. Only by investigating the individual cases as soon as possible can an outbreak be checked.

Typhoid Fever.—There were 21 cases of typhoid fever reported from Gardner during the month. In order to protect the public until there was time for investigation, the sale of milk from the farms which supplied the households involved was discontinued. A food handler, also, who had typhoid fever in 1913, was requested to give up his work until further notice.

The local board of health, assisted by the State Department of Health, made immediate investigation. Specimens of blood, feces and urine were obtained from 18 persons, — all who could in any way be regarded as the possible source of infection.

Of the reported cases, 10 took their meals at a co-operative boarding house. Milk was obtained from two dealers, one securing his supply from dairies H and W, the other receiving milk from dairies K and L. Milk from the latter dairies was also used by the 11 remaining cases.

After investigation and negative laboratory findings the H and W dairies were permitted to resume the sale of milk. A carrier was found at the K dairy, and on the L farm there was a suspected carrier, neither of whom admitted ever having had typhoid. The food handler, who had typhoid fever in 1913, gave a positive Widal and may be a carrier.

Septic Sore Throat. — An outbreak of septic sore throat occurred in Somerville and Medford, 33 cases being reported in the former city and 9 in the latter. Attention was called to the matter when 4 cases were reported to the Somerville board of health, which found, upon investigation, that all had a common milk supply. Further investigation, assisted by the State Department of Health, disclosed the fact that three men who were employed at the milk depot had sore throats on April 9 and worked until April 11. One man operated the capping machine and the other two handled the cases of bottled milk.

While the milk was pasteurized, it was found that the pasteurizer was not working properly, and that there were no temperature records for the period covering the illness of the employees, since the recording device was out of order.

Laboratory examinations were made of throat cultures taken from the three employees above mentioned, showing the presence of hæmolytic streptococci in the throat of the man who operated the capping machine. This was the probable source of infection. This illustrates the importance of exercising constant medical supervision of those employed in the handling of milk, and also calls attention to the necessity of efficient pasteurization and of a close watch over temperature records.

Infectious Jaundice. — An outbreak of over 150 cases of infectious jaundice in Newton was brought to the attention of the Department during the months of February, March and April. The attention of the local board of health was called to the situation by the many inquiries made by physicians and laymen of the city. About 20 cases were reported from a girls' seminary and 60 cases from the high school. In one instance 4 cases occurred in one family. The cases were distributed over the milk routes of every milk dealer in the city, but the source of the outbreak could not be ascertained.

The disease began with symptoms of mild influenza and catarrh, with a fever ranging from 99 to 104 degrees, usually about 100 to 101 degrees, with injected conjunctivæ and nasal discharge. In most of the cases jaundice appeared after seven days from the onset of the disease, and then a physician was called. In some cases prostration was noticed, but secondary complications were rare. A few cases showed joint involvement, and one case showed symptoms suggesting scurvy.

RARE DISEASES.

Anterior poliomyelitis was reported from Blandford, 1; Gardner, 1; Lynn, 2; Maynard, 1; Peabody, 1; Springfield, 1; West Springfield, 1; Worcester, 1.

Anthrax was reported from Boston, 2; Malden, 1; Weymouth, 1; Woburn, 1.

Cerebrospinal meningitis was reported from Attleboro, 1; Boston, 4; East Bridgewater, 1; Fall River, 1; Gardner, 4; Lowell, 2; Medford, 1; Newburyport, 1; Pittsfield, 1; Somerville, 1; Worcester, 1.

Dog bite was reported from Lawrence, 1; West Boylston, 1; Boston, 1.

Dysentery was reported from Somerville, 1.

Malaria was reported from Lynn, 1; Newton, 1.

Pellagra was reported from Boston, 1; Lawrence, 1; State Infirmary at Tewksbury, 1.

Septic sore throat was reported from Amherst, 2; Boston, 6; Chelsea, 1; Cambridge, 4; Fall River, 1; Haverhill, 1; Medford, 9; Newton, 1; Newburyport, 1; Somerville, 33; Swampscott, 2; Walpole, 1.

Smallpox was reported from Worcester, 5.

Tetanus was reported from Worcester, 1.

Trachoma was reported from Boston, 5; Lynn, 1; Rockport, 1.

DISTRIBUTION.

All Communicable Diseases.

	March, 1917.	April, 1917.	April, 1916.
Total cases,	8,474[1]	8,662	7,935
Case rate per 100,000 population,	220.2	225.0	210.0

[1] Certain cases have been revoked since the March Bulletin was issued.

Certain Prevalent Diseases.

	March, 1917.	April, 1917.	April, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[1]		
Diphtheria: —				Cambridge,	(25)	49
Total cases,	859	738	610	Lowell,	(10)	35
Case rate per 100,000 population,	22.3	19.2	16.1	Gardner,	(2)	14
				Springfield,	(11)	30
				Everett,	(7)	18
				Malden,	(14)	22
				Revere,	(4)	13
Measles: —				Fall River,	(15)	188
Total cases,	2,856[2]	3,173	4,169	Nantucket,	(0)	25
Case rate per 100,000 population,	74.1	82.4	110.3	Amesbury,	(1)	14
				Newburyport,	(1)	100
				Salisbury,	(0)	11
				Winthrop,	(10)	32
				Clinton,	(4)	35
				Templeton,	(0)	28
				Easthampton,	(1)	25
				Springfield,	(82)	128
				Greenfield,	(1)	253
				North Adams,	(6)	29
				Pittsfield,	(22)	59
				Scituate,	(5)	51
				Malden,	(26)	94
				Amherst,	(3)	26
				Northampton,	(17)	68
Scarlet fever: —				Georgetown,	(0)	15
Total cases,	722[2]	649	696	Greenfield,	(2)	16
Case rate per 100,000 population,	18.7	16.9	18.4	North Adams,	(1)	10
				Tewksbury State Infirmary,	(-)	36
Typhoid fever: —				Newburyport,	(1)	6
Total cases,	69	112	54	Watertown,	(0)	3
Case rate per 100,000 population,	1.8	2.9	1.4	Gardner,	(0)	19
Whooping cough: —						
Total cases,	295	263	656			
Case rate per 100,000 population,	7.7	6.8	17.4			
Tuberculosis, pulmonary: —						
Total cases,	711[2]	767	647			
Case rate per 100,000 population,	18.5	19.9	17.1			
Tuberculosis, other forms: —						
Total cases,	68	53	68			
Case rate per 100,000 population,	1.8	1.4	1.8			

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

[2] Certain cases have been revoked since the March Bulletin was issued.

NEW LEGISLATION.

General Acts, Chapter 11.

An Act relative to establishments for the manufacture of sausages or chopped meat or for the breaking or canning of eggs.

Be it enacted, etc., as follows:

Section two of chapter three hundred and twenty-five of the acts of the year nineteen hundred and fourteen, as affected by chapter twenty-two of the General Acts of the year nineteen hundred and fifteen, is hereby amended by striking out, in the fourth and fifth lines, the words "fine or imprisonment at the discretion of the court", and inserting in place thereof the following: — a fine of not less than ten nor more than one hundred dollars, or by imprisonment for not more than three months, or by both such fine and imprisonment, — so as to read as follows: — *Section 2.* Whoever carries on an establishment for the manufacture of sausages or chopped meat of any kind, or for the breaking or canning of eggs without a license as provided herein shall be punished by a fine of not less than ten nor more than one hundred dollars, or by imprisonment for not more than three months, or by both such fine and imprisonment. [*Approved February 19, 1917.*

General Acts, Chapter 149.

An Act relative to the cold storage of food products and to the authority of the state department of health with reference thereto.

Be it enacted, etc., as follows:

Section 1. Section one of chapter six hundred and fifty-two of the acts of the year nineteen hundred and twelve is hereby amended by striking out the word "forty", in the third and tenth lines, and inserting in place thereof, in each instance, the word: — forty-five, — by inserting after the word "Fahrenheit", in the third line, the words: — for a period of thirty days or more, — and by striking out the words "in cold-storage or refrigerating warehouses", in the fourth line, so as to read as follows: — *Section 1.* The term "cold storage", as used in this act, shall be construed to mean the storage of articles of food at or below a temperature of forty-five degrees Fahrenheit for a period of thirty days or more.

The term "cold-storage or refrigerating warehouse", as used in this act, shall be construed to mean an establishment employing refrigerating machinery or ice for the purpose of refrigeration, or a place otherwise artificially cooled, in which articles of food are stored for thirty days or more at a temperature of forty-five degrees Fahrenheit or below.

The term "article of food", as used in this act, shall be interpreted to include fresh meat, fresh meat products, except in process of manufacture, fresh food fish, poultry, eggs and butter.

SECTION 2. Said chapter six hundred and fifty-two is hereby amended by striking out section two and inserting in place thereof the following: — *Section 2.* No person, firm or corporation shall maintain a cold storage or refrigerating warehouse without a license issued by the state department of health. Any person, firm or corporation desiring such a license may make written application to the department, stating the situation of its plant or plants. On receipt of the application the department shall cause an examination to be made of the sanitary condition of the plant, and if it is found to be in a sanitary condition and otherwise properly equipped for the business of cold storage, the department shall cause a license to be issued authorizing the applicant to maintain therein a cold-storage or refrigerating warehouse for the period of one year: *provided*, that a license fee of ten dollars shall be paid. The license fees so received shall be paid into the treasury of the commonwealth. In case any warehouse licensed under the provisions of this section, or any part thereof, shall be deemed by the state department of health to be conducted in an unsanitary manner, it shall be the duty of the department to close such warehouse or part thereof, until it shall be put in sanitary condition, and the department shall have power also to suspend the license in case the required changes are not made within a reasonable time. Every such licensee shall furthermore submit, on or before the fifteenth day of each month, a report to the state department of health on a printed form to be provided by the department, stating the quantities of articles of food placed in cold storage during the month preceding, and also the quantities of butter and eggs held on the first day of the month in which the report is filed.

SECTION 3. Said chapter six hundred and fifty-two is hereby amended by striking out section five and inserting in place thereof the following: — *Section 5.* No person, firm or corporation shall hold any article of food in cold storage within this commonwealth which has been in cold storage for a period longer than twelve calendar months, except with the consent of the state department of health. The said department may, upon application, grant permission to extend the period of storage beyond twelve months for a particular consignment of goods, if the goods in question are found, upon examination, to be in proper condition for further storage at the end of twelve months. The length of time for which further storage is allowed shall be specified in the order granting the permission. A report on each case in which such extension of storage is permitted, including information relating to the reason for the action of the department, the kind and the amount of goods for which the storage period was extended, and the length of time for which the continuance was granted, shall be included in the annual report of the department.

SECTION 4. Section six of said chapter six hundred and fifty-two is hereby amended by inserting after the word "display", in the fourth and fifth lines, the words: — in a conspicuous place, — so as to read as follows: — *Section 6.* It shall be unlawful to sell, or to offer or expose for sale articles of food which have been held in cold storage without notifying persons purchasing, or intending to purchase, the same that they have been kept so by the display in a conspicuous place of a sign marked, "Cold Storage Goods Sold Here", and it shall be unlawful to represent or advertise as fresh goods articles of food which have been held in cold storage.

SECTION 5. Section seven of said chapter six hundred and fifty-two is hereby amended by striking out the words "to consumers", in the fourth line, so as to read as follows: — *Section 7.* It shall be unlawful to return to cold storage any article of food that has once been released from such storage for the purpose of placing it on the market for sale, but nothing in this section shall be construed to prevent the transfer of goods from one cold-storage or refrigerating warehouse to another: *provided,* that such transfer is not made for the purpose of evading any provision of this act.

SECTION 6. Said chapter six hundred and fifty-two is hereby amended by striking out section eight and inserting in place thereof the following: — *Section 8.* Broken eggs packed in cans, if not intended for use as food, when deposited in cold storage shall be denatured, and shall be marked by the owners, in accordance with forms prescribed by the state department of health, under the authority hereinafter conferred, in such a way as plainly to indicate the fact that they are not to be sold for food. [*Approved April 5, 1917.*

GENERAL ACTS, CHAPTER 189.

AN ACT TO HARMONIZE THE STANDARDS FOR TOTAL MILK SOLIDS AND MILK FAT.

Be it enacted, etc., as follows:

Section fifty-six of chapter fifty-six of the Revised Laws, as amended by chapter six hundred and forty-three of the acts of the year nineteen hundred and eight, is hereby further amended by striking out the words "and fifteen hundredths", in the fourth line, so as to read as follows: — *Section 56.* In prosecutions under the provisions of sections fifty-one to sixty-four, inclusive, milk which, upon analysis, is shown to contain less than twelve per cent of milk solids or less than three and thirty-five hundredths per cent of fat, shall not be considered of good standard quality. [*Approved April 16, 1917.*

GENERAL ACTS, CHAPTER 193.

AN ACT RELATIVE TO THE TAKING OF SAMPLES OF VINEGAR FOR THE PURPOSE OF ANALYSIS.

Be it enacted, etc., as follows:

SECTION 1. The collection of samples of vinegar, as authorized by the provisions of section twenty of chapter seventy-five of the Revised Laws, and of chapter six hundred of the acts of the year nineteen hundred and eleven, and all acts in amendment thereof, and in addition thereto, shall be made under the direction and supervision of the state department of health, or by the local boards of health. Samples may be purchased in the open market, and the stencillings, tags, brands or other markings upon the container shall be noted. They shall be divided into substantially two equal parts of at least sufficient volume to permit of a proper analysis as required by law, and there shall be delivered to the owner or other person from whom the vinegar is taken one of the two above mentioned parts properly labeled with identifying marks and sealed with a seal, provided for that purpose, at the time of the taking of the samples and a receipt therefor shall be given to the inspector or collector.

SECTION 2. Whoever makes, causes to be made, uses or has in his possession, an imitation or counterfeit of a seal used by an inspector or other officer engaged in the inspection of vinegar, and whoever changes or tampers with a sample taken or sealed as provided in section one of this act, shall be punished by imprisonment for not more than six months, or by a fine of not more than one hundred dollars, or by both such fine and imprisonment. [*Approved April 23, 1917.*

GENERAL ACTS, CHAPTER 256.

AN ACT RELATIVE TO THE CLASSIFICATION AND GRADING OF MILK.

Be it enacted, etc., as follows:

SECTION 1. A grade of milk to be known as "Grade A, Massachusetts Milk", is hereby established.

The said grade shall consist exclusively of milk produced within this commonwealth from healthy cows under cleanly and sanitary conditions, and shall be so cooled and cared for that in its raw state the bacteria count shall not average more than one hundred thousand per cubic centimeter, upon examination of five samples taken consecutively, each from a different lot of milk, on five separate days.

SECTION 2. "Grade A, Massachusetts Milk" shall, when sold, kept or offered for sale or exchange, be designated and marked with a label, cap or tag, in plain, legible, bold-faced type, in the words following: "Grade A, Massachusetts Milk". The percentage of milk fat may also be stated upon said label, cap or tag, but in no case shall the amount of fat be less than the Massachusetts legal standard.

SECTION 3. The board of health of any city or town, upon application of any person, firm, association or corporation, desiring to sell or exchange milk therein as "Grade A, Massachusetts Milk", shall cause the milk produced or to be sold or exchanged by such applicant to be tested for classification as prescribed by section two of this act, and if upon such examination and test the milk so produced or to be sold or exchanged by the applicant is found to comply with the aforesaid requirements of classification of "Grade A, Massachusetts Milk", the board of health shall issue without charge to the applicant a written permit to keep for sale, exchange or delivery, or to sell, exchange or deliver in such city or town, milk graded, classified, designated and labelled, as hereinbefore provided, as "Grade A, Massachusetts Milk".

Any permit so issued may, at any time, be revoked upon written notice to the holder thereof, by the board of health issuing the same, if milk offered by the holder for sale or exchange as so graded or classified shall not comply with the aforesaid requirements.

SECTION 4. If any grade or classification of milk other than "Grade A, Massachusetts Milk" is established permits for the sale of such milk shall be granted and may be revoked in accordance with the provisions of this act in respect to "Grade A, Massachusetts Milk", but such permits shall not be granted until the milk to be sold thereunder has been tested in such manner as the board of health, to whom application for the permit is made, shall determine. Milk sold or kept or offered for sale or exchange under such a permit shall be marked with a label, cap or tag in plain, legible, bold-faced type, expressing the name of the grade as it is determined by the board granting the permit.

SECTION 5. Whoever, himself or by his agent, or as the servant or agent of another, sells, exposes for sale or has in his custody or possession with intent to sell milk purporting to be of a grade established hereunder without having a permit so to do shall be subject to the penalty hereinafter provided.

SECTION 6. Whoever, himself or by his agent, or as the servant or agent of another, sells, exposes for sale, or has in his custody or possession with intent to sell, milk labelled as to its fat content which upon analyses of three samples taken consecutively, each from a different lot of milk, on three separate days, is found to contain less milk fat that that stated upon the label, cap or tag, and whoever sells, exposes for sale or exchange, or delivers, milk not wholly produced in Massachusetts in containers bearing upon a label, cap, tag, or otherwise, the words "Grade A, Massachusetts Milk", or other words indicating that such milk was produced in Massachusetts; and whoever in any manner represents that milk not wholly produced in Massachusetts was wholly produced in Massachusetts, or is of a grade designated as "Grade A, Massachusetts Milk", shall, for a first offence, be punished by a fine of not more than fifty dollars; for a second offence by a fine of not less than fifty nor more than one hundred dollars, and for a subsequent offence by a fine of not less than one hundred nor more than two hundred dollars. [*Approved May 14, 1917.*

SPECIAL ACTS, CHAPTER 113.

AN ACT TO AUTHORIZE THE CITY OF TAUNTON TO APPROPRIATE AN ANNUAL SUM FOR THE MAINTENANCE OF SCHOOL NURSES.

Be it enacted, etc., as follows:

SECTION 1. For the purpose of maintaining nurses to assist in caring for the health of the pupils of the public schools, the city of Taunton is hereby authorized to appropriate an annual sum not exceeding twenty-five hundred dollars. The said sum shall be expended and the nurses shall be appointed by, and act under the direction of, the school committee of the city.

SECTION 2. This act shall take effect upon its acceptance by the city council of said city, with the approval of the mayor. [*Approved February 21, 1917.*

OCCUPATIONAL DISEASES REPORTED BY STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	Occupation.	Locality.	Sex.	Age.	Color.
Anthrax,	Tanner,	Woburn,	M	50	W
Anthrax,	Leather,	Woburn,	M	20	W
Anthrax,	Wool sorter,	Weymouth,	M	52	W
Anthrax,	Brush maker,	Malden,	M	64	W
Anthrax,	Hide handler,	Woburn,	M	33	W
Anthrax,	Hide handler,	Woburn,	M	30	W
Asthma,	Baker,	Cambridge,	M	21	W
Dermatitis,	Fireman,	Cambridge,	M	-	-
Dermatitis,	Treer,	Brockton,	M	-	-
Lead poisoning,	Painter,	Boston,	M	39	W
Lead poisoning,	Painter,	Somerville,	M	56	W
Lead poisoning,	Painter,	Boston,	M	26	W
Lead poisoning,	Melter,	Charlestown,	M	38	W
Lead poisoning,	Ship builder,	Quincy,	M	33	W
Lead poisoning,	Test temperer,	Worcester,	M	-	W
Sodium cyanide,	Plating,	Boston,	M	16	-

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	8	2	885	3	859	53	541	2	2856	32	1181	–
2	Cities over 200,000.													
3	Boston,	778,500	2	–	287	1	297	19	93	–	695	2	331	–
4	Cities, 150,000–200,000.													
5	Worcester,	170,077	–	–	18	–	27	1	6	–	25	–	12	–
6	Cities, 100,000–150,000.	*570,968*	*1*	–	*109*	–	*147*	*6*	*238*	–	*691*	*15*	*86*	–
7	Fall River,	127,218	–	–	11	–	19	2	11	–	271	10	4	–
8	New Bedford,	115,272	–	–	19	–	2	–	120	–	76	1	9	–
9	Cambridge,	110,582	–	–	45	–	48	–	93	–	191	2	59	–
10	Springfield,	109,174	–	–	30	–	41	3	12	–	83	–	8	–
11	Lowell,	108,722	1	–	4	–	37	1	2	–	70	2	6	–
12	Cities, 50,000–100,000.	*511,498*	–	–	*118*	–	*118*	*11*	*21*	–	*94*	*1*	*154*	–
13	Lynn,	98,659	–	–	13	–	17	1	3	–	7	–	11	–
14	Lawrence,	92,187	–	–	18	–	5	1	–	–	1	–	2	–
15	Somerville,	91,102	–	–	9	–	29	3	4	–	15	–	1	–
16	Brockton,	64,668	–	–	42	–	5	1	2	–	4	–	121	–
17	Holyoke,	62,179	–	–	15	–	5	2	10	–	14	–	1	–
18	Haverhill,	51,806	–	–	8	–	46	3	–	–	30	1	2	–
19	Malden,	50,897	–	–	13	–	11	–	2	–	23	–	16	–
20	Cities and Towns, 25,000–50,000.	*498,330*	*1*	–	*93*	–	*91*	*7*	*35*	–	*277*	*1*	*158*	–
21	Chelsea,	48,273	–	–	12	–	9	–	–	–	6	–	7	–
22	Newton,	44,573	1	–	3	–	3	1	1	–	124	–	71	–
23	Quincy,	44,221	–	–	3	–	10	–	3	–	5	–	20	–
24	Pittsfield,	42,913	–	–	1	–	2	–	–	–	3	–	1	–
25	Fitchburg,	40,464	–	–	9	–	12	–	–	–	13	1	11	–
26	Salem,	39,872	–	–	16	–	1	–	3	–	1	–	8	–
27	Everett,	39,588	–	–	9	–	19	–	–	–	28	–	2	–
28	Taunton,	37,001	–	–	4	–	4	–	1	–	3	–	–	–
29	Brookline,	36,007	–	–	10	–	6	–	11	–	14	–	23	–
30	Medford,	33,758	–	–	3	–	5	–	–	–	73	–	4	–
31	Chicopee,	32,230	–	–	8	–	11	1	15	–	6	–	–	–
32	Waltham,	31,179	–	–	15	–	8	4	1	–	1	–	11	–
33	Revere,	28,251	–	–	–	–	1	1	–	–	–	–	–	–
34	Cities and Towns, 10,000–25,000.	*569,407*	*3*	*2*	*96*	–	*90*	*3*	*20*	*2*	*597*	*8*	*201*	–
35	Beverly,	24,863	1	1	11	–	1	–	–	–	2	–	–	–
36	Gloucester,	24,513	–	–	–	–	1	–	–	–	–	–	1	–
37	Northampton,	22,636	–	–	9	–	2	–	1	–	39	1	39	–
38	North Adams,	22,042	–	–	2	–	–	–	–	–	2	–	–	–
39	Peabody,	19,908	–	–	4	–	1	–	–	–	3	–	–	–
40	Attleboro,	19,480	–	–	11	–	2	–	–	–	2	–	4	–
41	Westfield,	19,456	–	–	–	–	2	–	2	–	–	–	–	–
42	Watertown,	18,123	–	–	3	–	15	–	1	–	29	1	2	–
43	Leominster,	17,675	–	–	8	–	6	1	–	–	–	–	3	–
44	Melrose,	17,394	–	–	3	–	–	–	–	–	46	–	1	–
45	Framingham,	17,146	–	–	5	–	1	1	5	–	35	1	72	–
46	Gardner,	17,116	–	–	2	–	17	–	–	–	4	–	6	–
47	Woburn,	16,896	1	1	3	–	2	–	–	–	2	–	1	–
48	Arlington,	16,524	–	–	–	–	–	–	1	–	14	–	–	–
49	Marlborough,	15,546	–	–	3	–	–	–	–	–	1	–	–	–
50	Newburyport,	15,470	–	–	3	–	2	1	–	2	96	1	–	–
51	Methuen,	15,137	–	–	–	–	–	–	–	–	1	–	–	–

TO THE PUBLIC HEALTH, MARCH, 1917.

38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		4 Malaria.		100 Septic Sore Throat.		5 Smallpox.		75A Trachoma.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
204	-	722	13	708	465	68	67	69	10	295	21	17	14	5	1	30	8	5	-	6	-	1
96	-	158	8	243	115	25	21	7	4	24	1	7	6	1	-	8	2	-	-	2	-	3
																						4
17	-	49	-	26	23	1	3	6	-	19	6	-	-	-	-	-	-	5	-	2	-	5
19	-	*81*	*1*	*139*	*90*	*19*	*25*	*16*	*1*	*35*	*4*	*2*	*2*	*1*	*1*	*1*	*1*	-	-	-	-	6
3	-	7	-	41	29	5	4	6	-	22	3	1	1	1	-	-	-	-	-	-	-	7
5	-	12	-	40	16	2	6	2	-	4	-	-	-	-	-	-	-	-	-	-	-	8
3	-	25	-	24	16	3	5	1	-	3	-	-	-	-	-	1	1	-	-	-	-	9
4	-	23	-	16	9	9	7	1	-	6	-	-	-	-	1	-	-	-	-	-	-	10
4	-	14	1	18	20	-	3	6	1	-	1	1	1	-	-	-	-	-	-	-	-	11
27	-	*106*	*1*	*72*	*57*	*12*	*3*	*14*	-	*50*	*2*	*1*	*2*	*1*	-	*2*	*2*	-	-	-	-	12
2	-	22	-	21	14	1	-	4	-	31	1	1	-	-	-	-	1	-	-	-	-	13
2	-	.10	-	11	9	4	1	3	-	10	1	-	-	-	-	-	-	-	-	-	-	14
2	-	34	-	14	13	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-	-	15
9	-	5	-	5	3	3	-	2	-	4	-	-	1	-	-	1	-	-	-	-	-	16
-	-	12	-	6	9	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	17
8	-	18	1	8	8	2	-	1	-	5	-	-	-	-	-	-	1	-	-	-	-	18
4	-	5	-	7	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	19
18	-	*72*	*1*	*55*	*45*	*3*	*4*	*7*	*1*	*83*	*3*	*3*	-	-	-	*13*	*1*	-	-	*2*	-	20
7	-	5	-	9	4	1	-	-	-	6	-	-	-	-	-	1	-	-	-	-	-	21
3	-	7	-	-	2	-	-	4	-	4	-	-	-	-	-	8	-	-	-	-	-	22
5	-	2	-	5	6	-	1	-	-	6	-	1	-	-	-	-	-	-	-	-	-	23
-	-	11	1	4	4	1	-	-	-	11	-	2	-	-	-	-	-	-	-	1	-	24
-	-	8	-	9	4	-	-	1	-	1	2	-	-	-	-	-	-	-	-	-	-	25
-	-	4	-	3	5	-	1	-	-	44	1	-	-	-	-	-	-	-	-	-	-	26
1	-	6	-	3	3	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	27
1	-	3	-	6	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	28
-	-	5	-	3	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	29
1	-	4	-	3	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	30
-	-	4	-	6	8	-	-	1	1	-	-	-	-	-	-	-	1	-	-	-	-	31
-	-	10	-	3	3	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	32
-	-	3	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33
13	-	*145*	*1*	*75*	*49*	*5*	*5*	*7*	*1*	*33*	*4*	*2*	*3*	*1*	-	*3*	-	-	-	-	-	34
-	-	4	-	3	6	-	-	-	-	3	-	1	1	-	-	-	-	-	-	-	-	35
1	-	1	-	7	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36
-	-	11	-	4	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	37
-	-	5	-	8	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38
-	-	1	-	7	1	1	-	1	-	1	-	1	1	-	-	-	-	-	-	-	-	39
1	-	10	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
1	-	15	-	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41
1	-	2	-	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42
1	-	3	-	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	43
3	-	2	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44
-	-	5	-	5	2	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	45
1	-	3	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	46
-	-	5	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47
-	-	8	-	2	4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48
-	-	5	-	1	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	49
-	-	-	-	2	-	1	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	50
-	-	1	-	1	-	-	1	1	-	-	2	-	-	-	-	-	-	-	-	-	-	51

Cases and Deaths from Diseases Dangerous

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,930	–	–	–	–	1	–	–	–	–	–	–	–
53	Weymouth,	14,444	–	–	–	–	–	–	–	–	1	–	–	–
54	Milford,	13,962	–	–	–	–	3	–	–	–	1	–	1	–
55	Winthrop,	13,918	–	–	–	–	–	–	2	–	26	–	8	–
56	Greenfield,	13,590	–	–	5	–	–	–	–	–	217	3	2	–
57	Wakefield,	13,389	–	–	2	–	1	–	–	–	–	–	–	–
58	Adams,	13,302	–	–	–	–	1	–	–	–	–	–	–	–
59	Plymouth,	13,273	–	–	3	–	1	–	–	–	–	–	–	–
60	Clinton,	13,243	–	–	3	–	–	–	–	–	37	1	–	–
61	Webster,	13,031	–	–	–	–	4	–	–	–	–	–	–	–
62	Norwood,	12,286	–	–	6	–	3	–	–	–	2	–	1	–
63	West Springfield,	12,273	–	–	–	–	5	–	–	–	–	–	4	–
64	Danvers,	11,955	–	–	1	–	9	–	4	–	3	–	–	–
65	Dedham,	11,820	–	–	4	–	2	–	–	–	8	–	7	–
66	Natick,	11,673	–	–	4	–	4	–	–	–	–	–	25	–
67	Saugus,	11,189	–	–	–	–	–	–	–	–	–	–	–	–
68	Easthampton,	10,430	–	–	–	–	–	–	–	–	21	–	–	–
69	Athol,	10,333	–	–	1	–	–	–	–	–	–	–	–	–
70	Winchester,	10,312	–	–	–	–	2	–	1	–	4	–	1	–
71	Bridgewater,	10,129	1	–	–	–	2	–	3	–	1	–	23	–
72	Towns, 5,000–10,000.	*355,823*	*1*	–	*118*	–	*45*	*3*	*45*	–	*210*	*1*	*117*	–
73	Towns, 2,500–5,000.	*181,232*	–	–	*19*	–	*11*	–	*45*	–	*99*	*3*	*18*	–
74	Towns under 2,500.	*213,171*	–	–	*26*	–	*28*	*2*	*38*	–	*168*	*1*	*104*	–
75	State Infirmary,	–	–	–	1	–	5	1	–	–	–	–	–	–

In addition to the above there occurred 4 cases of anthrax, 2 in Boston, 1 in Saugus and 1 in Woburn, and 1 death in Boston; 4 cases of dog bite (requiring antirabic treatment), 2 in Lawrence, 1 in Lowell and 1 in Pittsfield; 2 cases of dysentery in Boston and 1 death in Whately; 1 case of pellagra in Lowell and 2 deaths, 1 in the State Infirmary and 1 in Taunton; 1 case of trichinosis in North Adams with 1 death; and 1 death from tetanus in Pittsfield.

TO THE PUBLIC HEALTH — *Concluded.*

38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28 Tuberculosis, Pulmonary.		29-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		4 Malaria.		100 Septic Sore Throat.		5 Smallpox.		75A Trachoma.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	–	–	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	52
–	–	3	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	53
–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	54
–	–	30	–	2	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	55
1	–	5	1	–	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	56
–	–	6	–	–	–	–	–	–	–	4	1	–	–	–	–	–	–	–	–	–	–	57
–	–	–	–	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	58
–	–	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	59
–	–	2	–	–	1	–	–	–	–	10	–	–	–	–	–	–	–	–	–	–	–	60
–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	61
1	–	5	–	2	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	62
–	–	1	–	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	63
–	–	–	–	2	4	–	–	–	–	3	–	–	–	–	–	–	–	–	–	–	–	64
2	–	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	65
–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	66
–	–	3	–	–	2	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	67
–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	68
–	–	2	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	69
–	–	–	–	1	1	–	–	–	–	5	1	–	–	–	–	–	–	–	–	–	–	70
–	–	2	–	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	71
10	–	*72*	–	*40*	*24*	*2*	*3*	*4*	*2*	*16*	–	–	–	–	–	*2*	*2*	–	–	–	–	72
1	–	*11*	–	*16*	*12*	–	*2*	*3*	–	–	*1*	*2*	*1*	–	–	–	–	–	–	–	–	73
3	–	*26*	–	*5*	*35*	*1*	*1*	*5*	*1*	*35*	–	–	–	*1*	–	*1*	–	–	–	–	–	74
–	–	2	1	37	15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	75

Owing to the delay by physicians in returning death certificates sent them for addition and correction, the deaths given above, while approximately correct, are not absolutely complete.

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

Commissioner, Allan J. McLaughlin, M.D.

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Division of Communicable Diseases,	Director, Eugene R. Kelley, M.D.
Division of Water and Sewage Laboratories,	Director and Chemist, H. W. Clark.
Division of Biologic Laboratories,	Director and Pathologist, Milton J. Rosenau, M.D.
Division of Food and Drugs,	Director and Analyst, Hermann C. Lythgoe.
Division of Hygiene,	Director, Lyman A. Jones, M.D.

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George C. Whipple, S.B.
David L. Edsall, M.D.
Joseph E. Lamoureux, M.D.
Wm. J. Gallivan, M.D.
John T. Wheelwright.

State District Health Officers.

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The Eastern District,	Merrill E. Champion, M.D., Wollaston.
The Northeastern District,	Arthur A. Brown, M.D., Swampscott.
The North Midland District,	Charles E. Simpson, M.D., Lowell.
The South Midland District,	William W. Walcott, M.D., Natick.
The Wachusett District,	Francis A. Finnegan, M.D., Fitchburg.
The Connecticut Valley District,	John S. Hitchcock, M.D., Northampton.
The Berkshire District,	Howard A. Streeter, M.D., Pittsfield.

PUBLIC HEALTH BULLETIN

ISSUED MONTHLY

BY THE

STATE DEPARTMENT OF HEALTH

OF MASSACHUSETTS

JUNE, 1917

Vol. 4, No. 6

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass.,
under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

NUISANCES AND BOARDS OF HEALTH.

AT a meeting of the Association of Boards of Health of the Northeastern District, held in Lynn on April 11, 1917, James J. Ronan, Esquire, of Salem delivered an interesting address on the powers and duties of boards of health. After referring to the importance of such boards, and pointing out that they could be abolished only in the manner provided by law, that suits could not be brought against a city or town on account of action taken by boards of health, and that members of local boards were subject to liability "only in case of an act of positive negligence on the part of such official," he proceeded to discuss the subject of nuisances as follows: [1] —

The most important matter entrusted to the jurisdiction of local boards of health is undoubtedly that which pertains to the abatement of nuisances, and I propose to discuss with you very briefly the duties of a board in reference to this subject-matter.

The query which naturally arises is what constitutes a nuisance of such a nature as to necessitate the intervention of the health officials. It is not every solitary odor, the presence of a single mosquito, the croaking of a lonely frog in the adjoining quagmire, or the drone of the lazy beetle winging his solitary flight, that calls for official recognition.

The Rights in private property are in fact determined by the characteristics of a neighborhood, which may be not only residential but financial and industrial, and peopled by races of a mixed character, manifesting all stages of social refinement, exhibiting many different phases of living and diversified ideals. In such a locality in order to constitute a nuisance there must be some injury, either threatening or actually done to the public health, of such a nature that the ordinary reasonable official, entrusted with the power and authority that health officers possess, and acting in the interest of the community and solely for the common weal, would be justified in assuming the authority upon him conferred by law and solely in the interest of common good.

Perhaps if I quote from a recent decision of the Supreme Court as the test for determining the existence of a nuisance, in a case where the alleged injuries were dust and noise, I may more easily convey my meaning to you.

> The law of nuisance affords no rigid rule to be applied in all instances. It is elastic. It undertakes to require only that which is fair and reasonable under all the circumstances. In a Commonwealth like this, which depends for its material prosperity so largely on the continued growth and enlargement of manufacturing of diverse varieties,

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[1] Other portions of Mr. Ronan's address, omitted for lack of space, referred to various duties of boards of health.

> "extreme rights" cannot be enforced. One who settles in a district which possesses natural resources of a special kind cannot prohibit the development of those resources merely because it may interfere in some degree with personal satisfaction or æsthetic enjoyment. No one can move into a quarter given over to foundries or boiler shops and demand the quiet of a farm. On the other hand, the noisy or noisome factory cannot with impunity invade territory stamped by use for residence. The test whether a nuisance exists through noise in any case depends upon all the attendant conditions. It is not open to doubt that noise alone may constitute a nuisance. That which is proper in one place might be highly objectionable in another. That which might well be enjoined in one region would be innocuous in another. That which would be permitted at one hour or season might be restrained at another. In order that a noise may amount to a nuisance it must be harmful to the health or comfort of ordinary people. It is not enough that a person of peculiar temperament, unusual sensibilities or weakened physical condition may be affected. Nor is a noise protected if persons of exceptional strength and robustness, or whose faculties have become benumbed by close business or other experience with it, are not disturbed. The pertinent inquiry is whether the noise materially interferes with the physical comfort of existence, not according to exceptionally refined, uncommon or luxurious habits of living, but according to the simple tastes and unaffected notions generally prevailing among plain people. The standard is what ordinary people, acting reasonably, have a right to demand in the way of health and comfort under all the circumstances. The number of people concerned by the noise and the magnitude of the industry complained of are both elements entitled to consideration in reaching a conclusion as to the fact.

In the first place, it will be noticed that a sharp conflict occurs between the rights of the public on one hand, and the rights of the individual on the other, to enjoy the use and income of private property.

It is a principle well established, both by the common law and judicial decision, that no citizen shall be deprived of his property without due process of law, and it is also clearly settled that, if property is taken from a citizen, he must receive reasonable compensation therefor. To quote our Supreme Court: —

> The right to enjoy life, liberty and the pursuit of happiness is secured to every one under the Constitution of Massachusetts. This includes the right to pursue any proper vocation, to obtain a livelihood. Substantially the same right is secured also by the Constitution of the United States, which does not permit a State to deprive any person of life, liberty or property without due process of law.

It is sometimes a difficult matter to draw the line between the rights of the public as represented by health officers, and the rights of the individual in his property. But it is clear that any use of property which is detrimental to the general public may be prohibited on the theory that this is not tantamount to the confiscation or condemnation of this particular property, but is merely a restriction of its use conformable to the rights of the general public.

There are cases, of course, where the property itself, from its very nature, character and quality, is a nuisance, and in those cases the board has a right to proceed without any idea of compensating the owner of such property, because under those circumstances it is the property itself and not merely the use to which it is put that constitutes the nuisance. So strongly has the law protected property rights that under the old unwritten law, more frequently referred to as the common law, the great body of which was brought over here by the early colonists, it became necessary to have legislative enactments passed empowering health officers to proceed in the regulation and control over property the use of which may become a nuisance, and in other cases to prevent and remove the nuisance, as the case may be. Consequently the authority of the health officers is defined by a very elaborate system of statutes in this Commonwealth. This is one reason why we have so many health laws of recent vintage.

The statute authorizes the board to examine all nuisances, sources of filth and causes of sickness, and to destroy, remove and prevent the same as the case may require, and also to make regulations for the public health and safety relative thereto. This is a very broad statute, and confers full and plenary powers upon health officers, and not only gives them the rights, specifically mentioned in the statute, but all other rights that are reasonably necessary and incidental to carrying out the spirit and purport of the act.

The procedure under this statute is simple, and is intended to provide a summary and speedy remedy for the ordinary class of local nuisances occasioned by the neglect or mismanagement of an individual upon his own land, which could be removed or abated by him personally.

The board proceeds by giving a written order to the owner or the occupant to remove the nuisance, source of filth or cause of sickness within the time fixed in the order, and if the order is not complied with the board may cause the nuisance to be removed and the expense therefor paid by the person who caused or permitted the same.

An adjudication made by the board under this particular statute, adjudging that certain premises constitute a nuisance or source of filth or cause of sickness, is *prima facie* evidence of that fact. But it seems that in order to be protected in operating under this particular statute the board must fully comply with the statute by taking the steps above outlined, so that if there is any claim by the property owners the board may seek full justification under the law.

Another class of nuisances recognized by the statute is wet, rotten or soggy land, oftentimes covered by stagnant water, which may be offensive to residents or injurious to public health. In this class of cases the proceedings are commenced by a petition addressed to the board, whereupon the board should view the premises; and if satisfied that the petition should be granted, notice should then be issued to the petitioners and to all persons who may have an interest in the land, or who may be damaged or benefited by the proposed proceedings, and also to the mayor or chairman of selectmen. After a hearing upon the manner and mode of abating such nuisance, the question of damages, and the assessment and apportionment of the expense of the abatement, the board may cause such nuisance to be abated by entering upon the land and making such excavations, embankments and drains as may be necessary. It shall also determine at whose expense such improvements shall be kept in repair, and shall estimate and award both the damages sustained, or the benefit accruing to any person, by reason of such improvement.

The board is likewise expressly authorized by statute to make and enforce regulations relative to house drainage, and to make examination in any building, tenement or room occupied as a dwelling place which has for some reason or other become unfit for habitation and may become a nuisance or a cause of sickness to occupants or to the general public. In such cases the board may issue notice to the occupants either to clean up or to close up; and if they neglect to comply to the terms of the notice to clean the premises the board may cause the premises to be properly cleaned at the expense of the owner, or may forcibly remove the occupants and close up the premises, which shall not again be used for habitation without written permission of the board.

You may grant permits for the removal of any nuisance, infected articles, or sick persons within the limits of a city or town. In the case of baggage, clothing or goods suspected to be infected with any disease dangerous to the public health, upon application to the court you may compel the examination of the said goods or articles and deal with the same until, in the opinion of the board, they are free from infection.

While it is true that the board has a right to deal in a very speedy and summary manner with such articles or objects which in themselves constitute a nuisance, yet where the article is not intrinsically of such a nature as to constitute a nuisance, or, as the books define it, a nuisance *per se*, that is, a nuisance in itself, but may become so from a particular use, then the board must proceed with extreme caution, because in that class of cases the court very strongly defends individual rights in private property.

This is well illustrated by the statutes governing offensive trades. Undoubtedly, on account of the large amount of capital frequently invested in manufacturing plants, and their industrial advantages to a community, it was deemed desirable that the board of health should not have the final say on such matter. Consequently, in the determination of whether or not any trade or employment is a nuisance or hurtful to the inhabitants or dangerous to the public health or is attended by injurious or offensive odors, while the board may prohibit the nuisance thereof within the limits of the city or town or any place other than as assigned by the board, the property owner has a right to appeal from such orders of prohibition and have a trial by jury in the Superior Court for the final determination of this question of fact. While the law is zealous to protect the rights of the property owner it is also careful to guard the public health, and even while the matter is pending in the Superior Court the prohibited trade or employment cannot be carried on until there is a judgment in favor of the property owner. As a result, in all those cases where the board is concerned with an employment or trade it will be necessary to proceed under the provision of the statutes regulating offensive trades, and not under the general nuisance statute as above outlined.

The reason for this difference in procedure is that a trade or employment is held to be a property right within the Constitution, and consequently the prohibition or restriction of the exercise of this right involves a determination of property rights, and therefore, under the constitutional guarantee, a citizen is entitled to a trial by jury. It has recently held that the right to labor is a property right.

The difference in the application of the proper statute and its corresponding procedure is well shown by the following dicta from a Supreme Court decision.

In the exercise of the plenary statutory authority with which it is clothed, a board of health of a town may make such general regulations for the protection of the public health as are reasonable and expedient, and may declare that certain employments, by the offensive or filthy manner in which they are conducted, are injurious to the community, and should be entirely prohibited or regulated in such manner as they may prescribe, or that they constitute a nuisance which should be abated.

After being duly promulgated and served, such regulations or orders, until revoked, modified or declared void, have the force of law.

But the power to prohibit or regulate offensive trades is to be exercised in a manner distinct from the enforcing of general regulations passed under section 65 for the suppression of "sources of filfth and causes of sickness . . . which may . . . be injurious to the public health."

Of course it is manifest that there are certain occupations and employments over which the Legislature has entrusted absolute control to the board of health, and in those cases the board may, in its discretion, make laws and regulations and prescribe conditions under which licenses may be issued for the purpose of carrying on certain trades or employments, or, if it desires, it can absolutely prohibit such trades or employment.

Some of the statutes, it will be noticed, give the board the power to regulate and control certain establishments, employments, trades and businesses. What I desire to call to your attention is the fact that under a statute giving the power of regulating, you have no authority to absolutely prohibit the thing to be regulated. An attempt by the board to do so would be beyond the scope of the statute, and consequently of no binding force. On the other hand, the power to regulate carries with it all that is reasonably necessary and incidental for a full, complete and adequate control by the board over the specific subject. Undoubtedly, under the power to regulate, the board would have the right to issue a license and to fix the fee for certain licenses, provided that the said fee was fair, reasonable and of such an amount that it would simply pay the necessary expenses arising from the supervision of that particular trade or employment which was licensed, and not so excessive in amount as to show that the said license was rendered not only for the purpose of regulation, but rather for revenue.

EXAMINATION OF DOMESTIC WATER SUPPLIES.

At the session of the Legislature recently adjourned the following resolve was passed: —

Chapter 90.

Resolve directing the state department of health to make examination of domestic water supplies owned by individuals.

Resolved, That the state department of health is hereby authorized to make sanitary examination of waters used for domestic purposes and obtained from other than public water supplies, including a chemical and bacterial analysis where that is necessary. The department is also directed to advise as to the situation of new domestic water supplies and the protection of established domestic supplies, owned by individuals, in a manner similar to that now employed in the examination of public water supplies. The department shall report to the next general court on or before the second Wednesday in January the result of its examinations made hereunder, and shall include in the report any recommendations which it may deem expedient for the improvement of domestic water supplies in cities, towns and districts not supplied with water from public works, with an estimate of the probable cost of carrying out such recommendations, and with drafts of any legislation that may be necessary therefor. The department may expend a sum not exceeding twenty-five hundred dollars in carrying out the provisions of this resolve. [*Approved May 14, 1917.*

The first part of this resolve authorizes the State Department of Health to make sanitary examinations and analyses of individual water supplies, and to give advice regarding them, thereby making it possible to extend to individual households information and protection for their water supplies similar to that now given in relation to public water supplies. In order that the limited funds available for this purpose under the resolve may be made to go as far as possible, the following plan has been arranged.

Applications will be received until September 15 for the examination of individual water supplies (wells, springs, etc.). In order to render the collection of samples as inexpensive as possible, all applications received before the above date will be grouped geographically, and subsequently will be inspected and samples taken so far as funds permit.

Recommendations for further work of this character will be based upon the interest shown and the demand for the work to be done under this resolve.

Applications for the examination of individual water supplies should be submitted before Sept. 15, 1917, to the State Department of Health, State House, Boston, Mass.

SANITARY ORGANIZATION OF ZONE ABOUT THE MILITARY CAMP AT AYER, MASS.

THE Federal government proposes to establish a military camp of 30,000 soldiers on land lying partly in the towns of Ayer and Harvard. It is also rumored that negotiations are under way for adjoining land in Shirley and Lancaster. An artillery camp is spoken of for a location in Townsend, with a range for target practice near by.

While the army officers will have full charge of the troops and the camp, it will be of great advantage to them to have the civilian population already there, together with the large influx that such a camp may be expected to attract, well regulated.

The towns in which the camp is located, together with those adjoining, are Ayer, Littleton, Harvard, Lancaster, Shirley, Townsend, Groton and Pepperell, having a population according to the 1910 census of from 1,034 to 2,955, aggregating 16,534. During the next five years they gained in population but 397. These towns are as well organized for the preservation of health as the average Massachusetts town of their size. They have the usual sanitary conditions, consisting of little else than a good water supply, Harvard and Townsend being the only ones without a public supply for their thickly settled districts. None have a public sewer system, consequently most of them at times have cesspool, drainage and privy nuisances. But few have efficient milk inspectors. All have inspectors of slaughtering, but no inspectors of provisions. All have medical inspection of schools, but not of an intensive character. Ayer, Lancaster and Pepperell already have public health or district nurses, including school nursing, while Groton and Shirley have plans nearly perfected for employing similar workers.

Realizing that it would be an injustice to tax the towns for more than would be required for a first-class health organization in ordinary times, the Commissioner of Health addressed the following communication to His Excellency the Governor of the Commonwealth of Massachusetts: —

May 21, 1917.

To His Excellency, Hon. Samuel W. McCall, *Governor of the Commonwealth of Massachusetts, State House, Boston, Mass.*

Sir: — I have the honor to invite attention to the very serious sanitary problem which presents itself in connection with the proposed military camp at Ayer. It is proposed to place 30,000 men for training in this camp. There will be undoubtedly a surplus population of 8,000 or 10,000 civilians suddenly added to the population of Ayer and the surrounding towns. Camp followers, unlicensed venders of food and drink, prostitutes and other persons disposed to disregard law and ordinances will drift into this area.

Within a radius of 10 miles from Ayer as a center there are 15 towns with populations ranging from 800 to 3,000. Manifestly, these towns are unable to finance a proper health organization, and it would be unfair to expect that of them. Experience in England and France has proved that to avoid disaster the complete sanitary organization should be in the field working long before the recruits begin training. The Federal government, under existing law, is restricting its sanitary work to the care of the soldier and his camp. A bill for a Federal sanitary reserve corps, which would take care of the surroundings of camps and the civilian population contiguous thereto, is in Congress now, and has the unanimous support of the National Council of Defense. This may or may not go through, but even if it does it will operate too late to meet the emergency which we now face in Massachusetts.

To avoid disastrous conditions prompt action is necessary, and the sanitary organization should be placed in the field with the minimum of delay. There is no money available for such an extraordinary purpose in addition to the ordinary duties of the State Health Department. The work would require the full time of one District Health Officer, one assistant sanitary engineer, two sanitary inspectors, one food and drug inspector, three public health visiting nurses, and the staff and expenses of a small contagious disease hospital. A careful estimate of the cost of such an organization has been made, and $20,000 will be necessary for the period of one year.

In view of the fact that in the last analysis this is a Federal matter, an emergency obligation placed upon Massachusetts by Federal action, it seems reasonable that the Federal government would later take over the financing of such work and reimburse States for expenditures made. It would be a fatal blunder, however, to wait for Federal action to meet this menace and cover this emergency.

I have the honor, therefore, to recommend that the sum of $20,000, or such part thereof as may be necessary, be appropriated to be expended under the direction of the Commissioner of Health for the purpose of protecting the health of the people of Massachusetts and establishing and maintaining sanitary conditions in the area within a 15-mile radius of Ayer.

Respectfully,

A. J. McLaughlin,
Commissioner of Health.

Upon receiving the communication the Governor submitted the following message to the Legislature: —

EXECUTIVE DEPARTMENT, BOSTON, May 21, 1917.

To the Honorable Senate and House of Representatives.

The Commissioner of Health has just called to my attention the importance of making immediate provision for the sanitary protection of the people within the towns upon the site of the camp proposed to be established by the national government in the Commonwealth, and of the towns in the vicinity of the camp. He calls attention to the fact that the camp will probably attract a large surplus population, many of whom will not be disposed to regard the law, and that conditions will suddenly spring up which should be dealt with immediately; otherwise we may undergo the experience of France and England, and suffer through the failure to provide a complete sanitary organization. I submit herewith a copy of the communication to which I have referred.

I therefore recommend that you make an appropriation of $20,000 to be expended by the Commissioner of Health, with the approval of the Governor and Council, to provide a complete sanitary organization for the area within the neighborhood of the camp and likely to be affected by its establishment, and otherwise to promote the health of the people within that locality.

I think it is doubtful whether the ordinary local constabulary or the machinery for enforcing the law existing within the small towns affected would be adequate to cope with the moral evils and sufficient to secure a due enforcement of existing law. I therefore recommend that if, in the opinion of the Governor and Council, the means of enforcing law within said area are not adequate or are not adequately employed, a supplementary force of the Commonwealth may be established for that purpose by the Governor with the advice of the Council in order to secure the due enforcement of the laws within such area, and I recommend the appropriation for that purpose of the sum of $10,000, or so much thereof as may be necessary to be expended by the Governor with the consent of the Council.

SAMUEL W. MCCALL.

In response to this message the following special act was passed by the Legislature: —

SPECIAL ACTS, CHAPTER 369.

AN ACT MAKING APPROPRIATIONS FOR EXPENSES INCIDENT TO THE MOBILIZATION OF TROOPS IN CAMPS WITHIN THE COMMONWEALTH.

Be it enacted, etc., as follows:

SECTION 1. The sums hereinafter mentioned are hereby appropriated, to be paid out of the treasury of the commonwealth from the ordinary revenue, for the following purposes:

For the protection of health, and the prevention of the spread of disease caused by the mobilization of troops in military camps, a sum not exceeding twenty thousand dollars, to be expended by the commissioner of health, with the approval of the governor and council.

For the services and expenses of temporary detectives and police to be appointed by the governor and to act in conjunction with agents of the United States government in this commonwealth in preventing the evils incident to the mobilization of troops in military camps, a sum not exceeding ten thousand dollars, to be expended by the governor with the advice and consent of the council.

Section 2. This act shall take effect upon its passage. [*Approved May 25, 1917.*

The State Department of Health was asked by the town officials to direct the public health work in the various towns. The Commissioner appointed the following committee to represent the Department in the field: Dr. Charles E. Simpson of Lowell, chairman, Dr. William W. Walcott of Natick, and Dr. Francis A. Finnegan of Fitchburg, recorder.

An organization has been formed comprising an executive member of the board of health of the various towns as a community health council to act in conjunction with, and under the direction of, the State District Health Officers. In this way a uniformity of rules and regulations and in the manner of their enforcement throughout these towns will be secured. A similar organization of selectmen and school boards is under way, and it is hoped to interest the various public safety committees along similar lines.

It is proposed to establish in Ayer headquarters for the State officers who are to help in carrying out this work, and to furnish an inspector of milk, food and provisions from the State Health Department. A sanitary inspector or inspectors will also be provided, and a supervising nurse and other nurses if necessary. Some provision is under consideration for an isolation hospital.

Building and housing rules and regulations should be adopted, and regulations for licensing venders. Policing will necessarily have to be reorganized, and provisions have been made to augment the local force by State Police.

The committees on public safety will be called upon for various activities that do not come directly under the provisions for which the State Department of Health can spend money, but which have an important bearing on health work. Among these probably the most important will be the establishment of a dispensary for cases of minor sickness and emergency work, as well as a general hospital for those who are unable to pay the regular prices of the private hospitals.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of May, 1917, samples were collected in 34 cities and towns.

There were 821 samples of milk examined, of which 217 were below the legal standard, 4 samples were skimmed milk not properly labeled, and 42 samples contained added water.

There were 42 samples of food examined, of which the following were adulterated: 1 sample of canned peas which had been made from dried peas soaked before canning; 1 sample of sweetened cocoa containing sugar and the percentage not stated on the label; 1 sample of compound lard not properly labeled; 3 samples of sausage containing starch in excess of 2 per cent.; and 1 sample of vinegar low in acid.

There were 41 drugs examined, of which 11 were adulterated. These consisted of 2 samples of camphorated oil, 7 samples of spirit of nitrous ether, and 2 samples of tincture of iodine, somewhat deficient in the active ingredient.

There were 29 convictions for violation of the laws, $405 in fines being imposed. The Acton Farms Milk Company of Somerville, Joseph B. Algeo of Concord, on two counts, George L. Cousins of South Lincoln, Antonio H. DeCosta of South Braintree, Francis W. Grout of Ashburnham, and Benjamin Mendelson of Malden were convicted for violation of the milk laws. The Acton Farms Milk Company and Francis W. Grout appealed their cases. Max Bloom of Revere, Harry Dressler of Chelsea, and Elmer E. Ames, John Donellis, George Duce, Arthur B. Grant, Antonio J. Martin, Joe M. Mello, Jose Monez, on two counts, Phillip Murray, Jr., Benjamin F. Pease, Manuel Reis, John S. Rodrigues, Stanley Rowley, Antonio C. Sylvia, Joseph J. Sylvia, Martin J. Sylvia and Charles G. Wheldon of Nantucket were convicted for violation of the food laws. Joseph White of Roxbury was convicted for violation of the drug laws. Leroy Barr of New Braintree and George Wiegert of Worcester were convicted for violation of the slaughtering laws. George Wiegart appealed his case.

There were 15 confiscations made, consisting of 240 pounds of tuberculous beef, 9 pounds of tuberculous beef tongue, 67 pounds of immature veal, 286 pounds of decomposed beef kidneys, 97 pounds of decomposed beef livers, 81 pounds of decomposed beef tails, 329 pounds of decomposed pork livers, 71 pounds of decomposed pork shoulders, 21 pounds of dried-out veal, 184 pounds of dried-out sardine herring, 60 pounds of decomposed squid, and 100 pounds and 11 carloads (weighing 275,400 pounds) of decomposed miscellaneous fish. The 11 carloads of miscellaneous fish came from the Pacific coast and were, no doubt, spoiled by delay in transit.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

Four samples of milk containing added water, from Francis W. Grout of Ashburnham; 4 samples of milk containing added water, from William E. Nutting of East Jaffrey, N. H.; 8 samples of milk containing added water, from George W. Smith of Tyngsborough; 10 samples of milk containing added water, from George L. Cousins of South Lincoln; 2 samples of skimmed milk not properly labeled, from Samuel London of Saugus; 3 samples of milk containing added water, from George H. Schaffner of Watertown; 1 sample of "Early Bird" brand canned peas, which were soaked peas not properly labeled, packed by G. T. Redden Company, Denton, Md.; 1 sample of "Shawmut" brand sweetened cocoa, containing sugar and the percentage not stated on the label, packed for L. D. Margolis Company, Boston, Mass.; and 1 sample of vinegar low in acid, from the Hunter Chemical Company, Springfield, Mass.

Quarterly Report on Slaughtering.

A compilation of the quarterly reports on slaughtering for the quarter ending April 1 shows that during that period 59,698 animals were inspected by the local inspectors of slaughtering. Of this number, 9,132 were cattle, 27,180 were calves, 23,208 were hogs, 176 were sheep and 2 were goats. In addition to a number of parts which were condemned, where it was not necessary to condemn the entire carcass, 1,150 carcasses were condemned. Of this number, 185 were cattle, 797 were calves, 167 were hogs and 1 sheep. There were 743 calves condemned on account of immaturity; 206 animals on account of tuberculosis, of which 163 were cattle, 1 was a calf, and 42 were hogs; 21 animals on account of pneumonia, of which 2 were cattle and 19 were hogs; 92 hogs on account of hog cholera; 14 calves on account of weak condition; 19 animals which were lacerated, bruised or injured, of which 2 were cattle, 15 were calves and 2 were hogs. The remaining 55 animals were condemned on account of nephritis, intestinal obstruction, peritonitis, traumatic peritonitis, metroperitonitis, jaundice, ulcers, diarrhœa, abscesses, cancer, septicæmia, hemorrhage, phlebitis, polyarthritis, paralysis, tetanus, rheumatism, pregnancy, parturient apoplexy, difficult parturition, emaciation, sexual odor, strangulation, soiled, inspector not present, and died otherwise than by slaughter. Of this number 18 were cattle, 24 were calves, 12 were hogs and 1 sheep.,

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF MAY, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of May, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, . . .	1,028	101	496	131	300

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis, ...	335	63	272	
*Typhoid fever (Widal reaction), .	139	39	85	15
Typhoid fever (culture test), . .	140	8	132	
Malaria, ...	11	–	11	
Gonorrhœa, ...	190	17	173	
Miscellaneous, ...	54			

Total number of examinations made, 1,897.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR MAY, 1917.

General Prevalence.

A grand total of 11,486 cases of communicable diseases reported during May has brought to the front the large factor played in the morbidity of the State by the so-called minor diseases.

There were approximately 3,000 more cases of disease reported in May than in April of this year or in May, 1916. The increase was due largely to measles, German measles, chicken pox and mumps.

While it is apparent that these diseases are unduly prevalent, it means that they are also being reported better in most sections of the State. This year in May 1,762 cases of German measles were reported, as compared with 152 cases in May of last year; and 1,155 cases of mumps were reported in May, as compared with 245 cases in May of last year.

Cerebrospinal Meningitis. — There were 23 cases of cerebrospinal meningitis reported for the month, which is a slight increase over its usual endemic prevalence in Massachusetts. In view of the fact that in certain sections of the country cerebrospinal meningitis is epidemic, it is hoped that careful observation and isolation will be made of suspicious cases of this disease.

Poliomyelitis. — No great change has resulted in the standing of poliomyelitis during May. Nine cases were reported from 8 cities and towns.

Lobar Pneumonia. — This disease was made reportable on May 1, and there have been 360 cases reported for the month. This demonstrated the influence which this disease has on the morbidity and mortality rate.

Anthrax. — Twelve cases of anthrax were reported in May, two of which received their infection in a neighboring State and were sent to Massachusetts for hospital treatment. The importance of this disease has been growing from month to month since the beginning of the year. Nine of the cases were found to have handled dried cowhides from China; one handled hides from India; and the remaining two handled hides from Argentine. All were cases of external anthrax, and received the infection by contact. There are many cases where the diagnosis of anthrax may be confused with a furuncle or a carbuncle, and in case of doubt physicians can obtain a laboratory diagnosis by forwarding the material, or a swab from the lesion, to the State laboratory, which will make the necessary examination and determine the diagnosis.

The serum for the treatment of anthrax cases will be furnished by this Department upon request, as a supply of this serum is furnished by the United States Department of Agriculture and is now kept on hand.

Typhoid Fever. — There has been no serious outbreak of typhoid fever in May. However, far too many secondary cases were reported. Isolation of the sick patient with but one person skilled in caring for typhoid fever would prevent secondary cases and gradually reduce the morbidity rating of this disease in a community. It is necessary that the local boards of health, assisted by the physicians, carry on careful investigations in all cases, in this way preventing the needless cases that follow, and keeping the State rate for 1917 down to that of last year.

Diseases on the Premises of Milk Handlers. — During the month 11 farms were reported as having diseases present on the premises. The diseases were typhoid fever, diphtheria, scarlet fever, measles and septic sore throat. In 10 instances the original disease on the farm was reported, and precautionary measures were taken to prevent an outbreak. Thus, it was not necessary to shut off the distribution of milk from some of the dairies, while in others its distribution was restricted for a few days only.

By way of contrast, in the case of the farm where no precautions were taken there followed an epidemic of septic sore throat involving some 50 cases. Further mention of this appears later.

Epidemics and Outbreaks.

Smallpox. — There have been 34 cases of smallpox in Worcester since January. In May there were reported 22 cases in Worcester, 2 cases in Fitchburg and 1 case in Shrewsbury, all traced to two unrecognized cases which occurred in Worcester during the month of April. The first of these unrecognized cases died before the diagnosis was established, and was the source of infection of the further cases which occurred in May. The second unrecognized case received infection indirectly through the first case, both attending a meeting of a local workmen's organization in Worcester on April 26, and on the 28th of April the first case was reported as having smallpox.

Twelve persons, including one from Fitchburg and one from Shrewsbury, who attended this meeting were reported ill with smallpox. The other Worcester patients and the Fitchburg case were members of the families of men who attended the meeting or who were in contact with them. Two cases were also reported from Webster, and an investigation is in progress to determine the source of their infection. There were 11 virulent cases, 5 of which died.

Of the 27 cases 12 had never been vaccinated, 13 had been vaccinated more than seven years preceding the attack, 1 case had been vaccinated six years before, and in 1 case no data were obtainable.

Typhoid Fever. — A small outbreak of typhoid fever occurred in Gloucester, in a settlement of fishermen, where there were 3 cases in April and 3 in May. Investigation showed that they trade chiefly among themselves, and efforts are being made to isolate the carrier who is probably responsible.

Diphtheria. — Diphtheria is running much higher than in the past few years, and although no epidemic of serious proportions is present in the State, the number of cases reported from many towns is far above the average. In Whitman a series of 10 cases developed through the failure to quarantine and to take cultures from the suspected cases. The first case was a patient who may have received her infection during a visit to a neighboring town. No physician was called, and the cases that followed, with one exception, were in adjoining houses and in the same neighborhood.

Immediate culturing of sore throats is a necessity, and this, together with the quarantining of suspects, will prevent many of the small outbreaks such as this, and thus prevent an incipient epidemic. A group of closely connected cities — Everett, Malden, Revere, Somerville, Chelsea, Watertown and Cambridge — have all been having more diphtheria than usual. Lowell has also been persistently reporting many cases of diphtheria, but no common source has been located in the city. The probability is that there are unrecognized carriers and cases.

Septic Sore Throat. — Late in April and early in May about 50 cases of septic sore throat were reported in Gloucester. All of the cases took milk from one contractor who obtained his supply from two New Hampshire farms and three local dairies. The sale of milk from all these farms was stopped on May 5, until field investigation and laboratory examination could exclude them as a source of infection. In this manner the two dairies in New Hampshire and two of the local dairies were eliminated as the cause of the outbreak. The third local dairy had two cases of septic sore throat present at the beginning of the epidemic, and was apparently the source of the infection. The outbreak ceased when the sale of milk from this dairy was stopped.

In controlling an epidemic of septic sore throat in Somerville and Medford during April specimens from the milk handlers who were sick were submitted to careful laboratory examination in order to prevent their returning to work until they were proven to be no longer carriers of the disease. It is interesting to note that in the case of one worker a negative culture for hemolytic streptococci was not obtained until eight weeks after the onset of the disease, and he had been well apparently for four weeks. This proves the necessity of careful observation of persons handling milk supplies before allowing them to return to work.

Scarlet Fever. — A small outbreak in Shelburne is a good example of the disastrous results of releasing a case of scarlet fever from quarantine too early. A child recovering from the disease came to live with a relative in Shelburne. A few days later a child in the family she was visiting came down with scarlet fever. The latter child was allowed to attend school when apparently well, although she still had a nasal discharge. As a result, 8 other cases followed in a small school. Moral: Observe quarantine twenty-eight days, and until infectious discharges from nose and throat, ear or abscesses have ceased.

Food Poisoning. — About 200 cases of poisoning followed a banquet in Dorchester at which cooked ham, cooked beef and chicken salad were served. Suspicion was directed toward the salad, as all who were sick had partaken of it. The symptoms were chiefly vomiting, and, in a few instances, diarrhœa. Unfortunately, none of the chicken salad was obtainable when samples of food served at the banquet were taken. Laboratory examinations of all food except the chicken salad were negative for anything that might have been the cause of the disease.

The histories of such cases of poisoning with failure to obtain samples of the food served are far too common. If the authorities in charge, or physicians who are called, will obtain samples while on the spot, satisfactory results can be obtained, and the source of infection located, thus making it possible to prevent future occurrences of this nature.

RARE DISEASES.

Anterior poliomyelitis was reported from Chicopee, 1; Everett, 1; Malden, 1; Boston, 1; Middleton, 1; Palmer, 1; Quincy, 1; Salisbury, 1; Springfield, 1.

Anthrax was reported from Boston, 2; Chelsea, 1; Greenfield, 1; Lynn, 1; Salem, 1; Woburn, 6.

Cerebrospinal meningitis was reported from Belmont, 1; Boston, 7; Cambridge, 2; Chelsea, 1; Lowell, 4; Lynn, 1; North Adams, 1; Pittsfield, 4; Revere, 1; Waltham, 1.

Dog bite was reported from Attleboro, 1; Boston, 1; Lawrence, 1; Lowell, 3; North Adams, 1.

Dysentery was reported from Boston, 1; Northampton, 1.

Leprosy was reported from Boston, 1; Springfield, 1.

Malaria was reported from Cambridge, 1; Canton, 1; Hull, 1; Newton, 1; Wellesley, 1.

Pellagra was reported from Boston, 1.

Septic sore throat was reported from Attleboro, 1; Arlington, 2; Beverly, 2; Boston, 8; Cambridge, 1; Chelsea, 1; Melrose, 3; New Bedford, 1; Scituate, 1; Taunton, 1.

Smallpox was reported from Fitchburg, 2; Shrewsbury, 1; Webster, 2; Worcester, 22.

Trachoma was reported from Boston, 7; Chelsea, 1; Lawrence, 1; Lowell, 1; Ware, 1; Weymouth, 1; Worcester, 1.

Tetanus was reported from Peabody, 1.

DISTRIBUTION.

All Communicable Diseases.

	April, 1917.	May, 1917.	May, 1916.
Total cases,	8,648	11,486	8,402
Case rate per 100,000 population,	224.9	298.4	222.3

Certain Prevalent Diseases.

	April, 1917.	May, 1917.	May, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[1]
Diphtheria: —				Attleboro, (2) 11 Cambridge, (21) 54 Chelsea, (4) 13 Everett, (7) 18 Haverhill, (5) 13 Malden, (9) 27 Revere, (5) 14 Lowell, (15) 47 Watertown, (2) 12 Gardner, (0) 9 Springfield, (12) 33
Total cases,	738	876	543	
Case rate per 100,000 population,	19.2	22.8	14.4	
Measles: —				Fall River, (19) 264 Cambridge, (167) 354 Scituate, (3) 48 Malden, (29) 116 Newburyport, (0) 79 Billerica, (2) 27 Northbridge, (2) 50 Athol, (0) 58 Lancaster, (1) 20 Amherst, (5) 57 Holyoke, (40) 111 Northampton, (33) 93 Springfield, (45) 130 Bernardston, (0) 21 Dalton, (0) 78 Florida, (0) 15 Greenfield, (2) 104 Heath, (0) 10 North Adams, (4) 158 Pittsfield, (27) 196
Total cases,	3,169	4,211	4,438	
Case rate per 100,000 population,	82.3	109.4	117.4	
Scarlet fever: —				
Total cases,	648	567	703	
Case rate per 100,000 population,	16.8	14.7	18.6	
Typhoid fever: —				Everett, (1) 3 Gloucester, (0) 3
Total cases,	112	70	77	
Case rate per 100,000 population,	2.9	1.8	2.0	
Whooping cough: —				
Total cases,	263	355	732	
Case rate per 100,000 population,	6.8	9.2	19.4	
Tuberculosis, pulmonary: —				
Total cases,	758	800	722	
Case rate per 100,000 population,	19.7	20.8	19.1	
Tuberculosis, other forms: —				
Total cases,	55	69	61	
Case rate per 100,000 population,	1.4	1.8	1.6	

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

DISEASE.	Occupation.	Locality.	Sex.	Age.	Color.
Aniline oil,	Rubber worker,	Chicopee Falls,	M	40	W
Aniline oil,	Rubber worker,	Chicopee Falls,	M	34	W
Anthrax,	Freight handler,	Boston,	M	27	W
Anthrax,	Freight handler,	Boston,	M	32	C
Anthrax,	Hide handler,	Woburn,	M	30	W
Anthrax,	Hide handler,	Woburn,	M	30	W
Anthrax,	Hide handler,	Lynn,	M	32	W
Anthrax,	Hide handler,	West Lynn,	M	–	–
Anthrax,	Hide handler,	Salem,	M	42	W
Anthrax,	Leather worker,	Woburn,	M	40	W
Anthrax,	Tanner,	Woburn,	M	23	W
Benzine,	Rubber worker,	Hyde Park,	M	45	W
Brass,	Brass foundry,	Jamaica Plain,	M	30	W
Dermatitis,	Tar roofer,	Northampton,	M	30	W
Dermatitis,	Manufacturing insect powder,	Jamaica Plain,	M	18	W
Lead,	Cotton mill,	Fall River,	M	31	W
Lead,	Painter,	Malden,	M	58	W
Lead,	Painter,	Jamaica Plain,	M	36	W
Lead,	Painter,	Jamaica Plain,	M	–	–
Lead,	Painter,	Cambridge,	M	51	W
Lead,	Lead manufacturing,	Roxbury,	M	23	W
Lead,	Lead manufacturing,	Roxbury,	M	25	W
Lead,	Manufacturing auto bodies,	Jamaica Plain,	M	37	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	9	5	657	6	738	67	896	–	3,169	37	1,039	1
2	CITIES OVER 200,000.													
3	Boston,	778,500	–	–	188	5	265	21	144	–	899	8	266	–
4	CITIES, 150,000–200,000.													
5	Worcester,	170,077	1	–	8	–	22	4	7	–	16	3	12	–
6	CITIES, 100,000–150,000.	*570,968*	*1*	*1*	*83*	–	*140*	*16*	*258*	–	*658*	*12*	*105*	–
7	Fall River,	127,218	–	–	7	–	19	4	23	–	188	8	3	–
8	New Bedford,	115,272	–	–	11	–	7	2	52	–	40	1	10	–
9	Cambridge,	110,582	–	–	26	–	49	2	110	–	280	1	57	–
10	Springfield,	109,174	1	1	38	–	30	5	72	–	126	2	35	–
11	Lowell,	108,722	–	–	1	–	35	3	1	–	24	–	–	–
12	CITIES, 50,000–100,000.	*511,498*	*2*	*1*	*84*	–	*88*	*7*	*29*	–	*192*	*1*	*208*	–
13	Lynn,	98,659	2	1	9	–	7	2	7	–	7	–	5	–
14	Lawrence,	92,187	–	–	3	–	11	2	–	–	2	–	3	–
15	Somerville,	91,102	–	–	14	–	21	1	2	–	34	–	1	–
16	Brockton,	64,668	–	–	26	–	4	–	4	–	3	–	181	–
17	Holyoke,	62,179	–	–	8	–	9	1	12	–	15	–	–	–
18	Haverhill,	51,806	–	–	5	–	14	–	4	–	37	–	–	–
19	Malden,	50,897	–	–	19	–	22	1	–	–	94	1	18	–
20	CITIES AND TOWNS, 25,000–50,000.	*498,330*	–	*1*	*105*	–	*94*	*8*	*62*	–	*305*	*5*	*125*	–
21	Chelsea,	48,273	–	–	10	–	12	–	–	–	3	–	–	–
22	Newton,	44,573	–	–	10	–	6	2	21	–	91	1	39	–
23	Quincy,	44,221	–	–	5	–	7	–	2	–	7	–	16	–
24	Pittsfield,	42,913	–	–	1	–	2	–	4	–	59	–	2	–
25	Fitchburg,	40,464	–	–	6	–	12	2	–	–	21	–	16	–
26	Salem,	39,872	–	–	3	–	1	1	–	–	3	–	9	–
27	Everett,	39,588	–	–	8	–	18	2	–	–	28	1	7	–
28	Taunton,	37,001	–	–	4	–	3	1	1	–	4	3	–	–
29	Brookline,	36,007	–	–	31	–	2	–	20	–	28	–	20	–
30	Medford,	33,758	–	1	5	–	11	–	–	–	53	–	2	–
31	Chicopee,	32,230	–	–	2	–	1	–	11	–	6	–	–	–
32	Waltham,	31,179	–	–	20	–	6	–	3	–	2	–	14	–
33	Revere,	28,251	–	–	–	–	13	–	–	–	–	–	–	–
34	CITIES AND TOWNS, 10,000–25,000.	*569,407*	*3*	*1*	*59*	–	*72*	*4*	*118*	–	*677*	*4*	*126*	*1*
35	Beverly,	24,863	–	–	4	–	–	–	3	–	–	–	–	–
36	Gloucester,	24,513	–	–	–	–	–	–	–	–	1	–	–	–
37	Northampton,	22,636	–	–	–	–	3	–	14	–	68	–	11	1
38	North Adams,	22,042	–	–	2	–	–	–	1	–	29	–	–	–
39	Peabody,	19,908	1	–	–	–	1	–	1	–	1	–	–	–
40	Attleboro,	19,480	–	–	3	–	2	–	–	–	2	–	2	–
41	Westfield,	19,456	–	–	–	–	4	–	6	–	2	–	–	–
42	Watertown,	18,123	–	–	1	–	8	–	3	–	18	–	2	–
43	Leominster,	17,675	–	–	–	–	2	–	–	–	1	–	3	–
44	Melrose,	17,394	–	–	–	–	2	1	2	–	17	–	–	–
45	Framingham,	17,146	–	–	9	–	1	1	45	–	29	–	61	–
46	Gardner,	17,116	1	–	1	–	14	–	–	–	5	–	3	–
47	Woburn,	16,896	–	–	8	–	–	–	–	–	32	–	2	–
48	Arlington,	16,524	–	–	1	–	–	–	–	–	5	–	–	–
49	Marlborough,	15,546	–	–	–	–	4	–	–	–	–	–	1	–
50	Newburyport,	15,470	–	–	–	–	1	–	–	–	100	2	–	–
51	Methuen,	15,137	–	–	–	–	–	–	–	–	1	–	–	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and correc-

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38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28–29 Tuberculosis, Pulmonary.		30–35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		100 Septic Sore Throat.		5 Smallpox.		75A Trachoma.		22 Anthrax.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
197	–	648	18	757	427	55	61	111	16	263	24	17	15	62	5	5	2	7	–	5	1	1
																						2
88	–	124	3	254	82	18	14	19	–	23	1	3	4	6	–	–	–	5	–	2	–	3
																						4
7	–	40	1	39	19	–	4	2	–	17	7	1	–	–	–	5	2	–	–	–	–	5
32	–	*80*	*2*	*137*	*83*	*7*	*12*	*15*	*4*	*54*	*5*	*3*	*5*	*5*	*1*	–	–	–	–	–	–	6
2	–	15	–	47	20	1	1	7	1	36	1	1	1	1	–	–	–	–	–	–	–	7
12	–	5	–	41	16	3	5	1	1	2	1	–	–	–	–	–	–	–	–	–	–	8
10	–	25	–	21	19	3	1	2	–	2	–	–	1	4	–	–	–	–	–	–	–	9
5	–	27	–	13	8	–	–	2	1	11	–	–	–	–	1	–	–	–	–	–	–	10
3	–	8	2	15	20	–	5	3	1	3	3	2	3	–	–	–	–	–	–	–	–	11
30	–	*89*	*3*	*85*	*56*	*5*	*6*	*11*	*5*	*35*	*1*	*1*	*2*	*34*	*1*	–	–	*1*	–	*1*	–	12
4	–	28	–	16	16	2	1	3	–	20	–	–	1	–	–	–	–	1	–	–	–	13
2	–	1	–	14	13	2	1	1	1	7	1	–	1	–	–	–	–	–	–	–	–	14
5	–	23	1	11	6	–	2	3	1	3	–	1	–	33	1	–	–	–	–	–	–	15
7	–	2	–	17	5	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	16
1	–	10	–	11	5	–	2	2	1	–	–	–	–	–	–	–	–	–	–	–	–	17
6	–	12	1	12	7	1	–	1	2	4	–	–	–	1	–	–	–	–	–	–	–	18
5	–	13	1	4	4	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–	19
16	–	*60*	*1*	*73*	*41*	*5*	*6*	*14*	*1*	*81*	*3*	*2*	*1*	*11*	–	–	–	–	–	–	*1*	20
8	–	2	–	9	4	–	–	1	–	1	–	–	–	1	–	–	–	–	–	–	1	21
2	–	6	–	4	–	–	–	3	–	4	–	–	–	1	–	–	–	–	–	–	–	22
–	–	7	–	7	5	–	1	2	–	14	–	–	–	–	–	–	–	–	–	–	–	23
–	–	13	–	6	2	–	–	–	–	9	–	1	–	–	–	–	–	–	–	–	–	24
2	–	4	1	6	6	2	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	25
–	–	2	–	7	5	1	1	–	–	34	1	–	–	–	–	–	–	–	–	–	–	26
2	–	3	–	3	–	1	–	–	–	6	1	–	–	–	–	–	–	–	–	–	–	27
–	–	4	–	4	5	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	28
–	–	2	–	1	2	–	–	2	–	13	–	–	–	–	–	–	–	–	–	–	–	29
1	–	5	–	4	2	–	–	2	–	–	–	1	1	9	–	–	–	–	–	–	–	30
1	–	–	–	13	7	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	31
–	–	5	–	4	1	–	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	32
–	–	7	–	5	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	33
14	–	*118*	*2*	*76*	*51*	*11*	*8*	*45*	*5*	*24*	*2*	*6*	*2*	*1*	*3*	–	–	–	–	*2*	–	34
–	–	5	–	2	2	–	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–	35
1	–	–	–	4	6	2	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	36
1	–	4	–	6	10	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	37
–	–	10	–	5	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	38
1	–	1	–	5	2	1	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	39
–	–	5	–	1	–	–	1	–	–	3	–	1	–	–	–	–	–	–	–	–	–	40
–	–	7	–	1	5	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	41
–	–	1	–	1	1	1	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	42
–	–	1	–	6	2	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	43
4	–	4	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	44
–	–	3	–	5	–	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	45
1	–	2	–	4	2	1	–	19	2	–	–	4	–	–	–	–	–	–	–	–	–	46
1	–	5	–	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	–	47
1	–	7	–	1	–	1	–	2	–	–	–	–	1	–	–	–	–	–	–	–	–	48
1	–	–	–	3	–	2	–	–	–	4	1	–	–	–	–	–	–	–	–	–	–	49
–	–	1	–	1	–	–	–	6	–	–	–	1	–	1	1	–	–	–	–	–	–	50
–	–	–	–	2	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	51

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tion, the deaths given above, while approximately correct, are not absolutely complete.

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		6 Measles.		19C Mumps.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge, ...	14,930	–	–	1	–	2	–	–	–	–	–	–	–
53	Weymouth, ...	14,444	–	–	–	–	–	–	–	–	1	–	–	–
54	Milford, ...	13,962	–	–	–	–	1	–	–	–	–	–	1	–
55	Winthrop, ...	13,918	–	–	4	–	3	–	2	–	32	1	9	–
56	Greenfield, ...	13,590	–	–	10	–	–	–	9	–	253	–	7	–
57	Wakefield, ...	13,389	–	–	–	–	1	–	–	–	–	–	–	–
58	Adams, ...	13,302	–	–	–	–	1	–	–	–	–	–	–	–
59	Plymouth, ...	13,273	–	–	–	–	1	–	–	–	3	–	–	–
60	Clinton, ...	13,243	–	–	2	–	–	–	–	–	35	1	1	–
61	Webster, ...	13,031	–	–	2	–	6	1	–	–	–	–	–	–
62	Norwood, ...	12,286	–	–	1	–	–	–	18	–	6	–	–	–
63	West Springfield, ...	12,273	1	1	–	–	6	–	–	–	–	–	–	–
64	Danvers, ...	11,955	–	–	2	–	2	–	4	–	–	–	–	–
65	Dedham, ...	11,820	–	–	1	–	1	–	1	–	5	–	–	–
66	Natick, ...	11,673	–	–	–	–	–	–	–	–	1	–	9	–
67	Saugus, ...	11,189	–	–	–	–	4	1	–	–	–	–	–	–
68	Easthampton, ...	10,430	–	–	–	–	1	–	–	–	25	–	–	–
69	Athol, ...	10,333	–	–	1	–	1	–	–	–	3	–	–	–
70	Winchester, ...	10,312	–	–	4	–	–	–	6	–	1	–	6	–
71	Bridgewater, ...	10,129	–	–	2	–	–	–	3	–	1	–	8	–
72	TOWNS, 5,000–10,000.	*355,823*	*1*	*1*	*95*	–	*30*	*3*	*108*	–	*178*	*3*	*110*	–
73	TOWNS, 2,500–5,000.	*181,232*	–	–	*16*	–	*10*	–	*90*	–	*166*	*1*	*14*	–
74	TOWNS UNDER 2,500.	*213,171*	*1*	–	*19*	–	*15*	*1*	*80*	–	*78*	–	*73*	–
75	STATE INFIRMARY, ...		–	–	–	1	2	3	–	–	–	–	–	–

In addition to the above there occurred 3 cases of dog bite (requiring anti-rabic treatment), 1 in Boston, deaths, 1 in Lowell and 1 in Blandford; 2 cases of malaria, 1 in Lynn and 1 in Newton; 1 case of tetanus State Infirmary, with 1 death in Boston.

In the January, February and March tables the heading for pulmonary tuberculosis should have read

TO THE PUBLIC HEALTH — *Concluded.*

38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28–29 Tuberculosis, Pulmonary.		30–35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		100 Septic Sore Throat.		5 Small-pox.		75A Trachoma.		22 Anthrax.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	52
–	–	–	–	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	53
2	–	4	–	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	54
–	–	9	–	2	1	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	55
–	–	16	–	–	3	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	56
–	–	3	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	57
–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	58
–	–	–	–	1	1	–	1	3	1	–	–	–	–	–	–	–	–	–	–	–	–	59
–	–	–	–	1	2	–	1	–	–	10	1	–	–	–	–	–	–	–	–	–	–	60
1	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	61
–	–	5	1	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	62
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	63
–	–	1	–	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	64
–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	65
–	–	8	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	66
–	–	3	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	67
–	–	3	–	1	2	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	68
–	–	4	–	1	1	–	–	4	1	–	–	–	–	–	–	–	–	–	–	–	–	69
–	–	1	–	–	2	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	70
–	–	4	–	–	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	71
6	–	*57*	*1*	*38*	*25*	*8*	*6*	*5*	*1*	*10*	*2*	–	*1*	*5*	–	–	–	–	–	–	–	72
8	–	*20*	–	*12*	*17*	*1*	*1*	–	–	–	*1*	*1*	–	–	–	–	–	*1*	–	–	–	73
1	–	*26*	*1*	*17*	*24*	–	*2*	–	–	*19*	*2*	–	–	–	–	–	–	–	–	–	–	74
–	–	34	4	26	29	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	75

1 in Lawrence and 1 in West Boylston; 2 cases of dysentery, 1 in Newton and 1 in Somerville, and 2 in Worcester and 1 death in Wareham; and 3 cases of pellagra, 1 in Boston, 1 in Lawrence and 1 at the

28–29 and the heading for Tuberculosis, Other Forms, 30–35.

NEW LEGISLATION.

General Acts, Chapter 259.

An Act defining pasteurized milk and regulating the sale thereof.

Be it enacted, etc., as follows:

Section 1. Pasteurized milk is hereby defined to be natural cow's milk not more than seventy-two hours old when pasteurized, subjected for a period of not less than thirty minutes, to a temperature of not less than one hundred and forty degrees nor more than one hundred and forty-five degrees Fahrenheit, and immediately thereafter cooled therefrom to a temperature of fifty degrees Fahrenheit or lower.

Section 2. It shall be unlawful to sell, exchange or deliver, or to advertise, represent, or describe, or to offer or expose for sale or to have in possession with intent to sell, as pasteurized milk, milk not pasteurized in conformity with the provisions of this act.

Section 3. Any violation of this act shall be punished by a fine of not less than ten dollars for a first offence, and of not more than one hundred dollars for any subsequent offence.

Section 4. This act shall take effect on the first day of January in the year nineteen hundred and eighteen. [*Approved May 16, 1917.*

General Acts, Chapter 290.

An Act relative to subsidies to cities and towns on account of consumptive patients as determined by the bed capacity of certain hospitals.

Be it enacted, etc., as follows:

Section 1. Chapter five hundred and ninety-seven of the acts of the year nineteen hundred and eleven, as amended in section one by section one of chapter six hundred and thirty-seven of the acts of the year nineteen hundred and twelve, and by chapter fifty-seven of the General Acts of the year nineteen hundred and sixteen, is hereby further amended by striking out the said section, and inserting in place thereof the following: — *Section 1.* Every city or town which places its patients suffering from tuberculosis in a municipal or incorporated tuberculosis hospital in this commonwealth, or in a building or ward set apart for patients suffering from tuberculosis by a municipal or incorporated hospital in this commonwealth, shall be entitled to receive from the commonwealth a subsidy of five dollars a week for each patient who is unable to pay for his support, or whose kindred bound by law to maintain him are unable to pay for the same; but a city or town shall not become entitled to this subsidy unless, upon examination authorized by the trustees of hospitals for consumptives, the sputum of such patient be found to contain bacilli of tuberculosis, nor unless the hospital building or ward be approved by said trustees, who shall not give such approval unless they have by authority of law, or by permission of the hospital, full authority to inspect the same at all times. Said trustees may at any time withdraw their approval: *provided, however*, that in the case of those hospitals having a bed capacity which is in excess of the number of beds needed for the localities which these institutions serve for patients exhibiting tubercle bacilli in their sputum, the subsidy above provided shall be allowed for such patients not exhibiting tubercle bacilli in their sputum as in the joint opinion of the superintendent of the institution and of the state district health officer of the district in which the hospital is situated are bona fide cases of consumption and have been in the institution more than thirty days. The determination of the question of the number of beds in excess of the number of beds needed for patients exhibiting tubercle bacilli in their sputum shall be made as follows: — the city board of health shall first file an application for a tuberculosis survey of the localities served by such tuberculosis hospital, stating in the application the reasons for the belief that the hospital is already providing proper care for all cases showing tubercle bacilli and subject to hospital treatment. On receipt of such an application the state department of health and the state trustees of hospitals for consumptives shall cause a careful survey to be made by representatives of both departments.

Following the filing of the report of such survey the public health council of the state department of health and the trustees of hospitals for consumptives, sitting jointly, shall determine and decree the average number of beds needed in such institutions for patients exhibiting tubercle bacilli in their sputum. This number shall be subject to re-determination by a new survey made in a similar manner from time to time thereafter upon application by the city board of health, but such application shall not be made more often than once in three years.

Section 2. This act shall take effect upon its passage. [*Approved May 24, 1917.*

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

Commissioner, Allan J. McLaughlin, M.D.

Division of Administration,	Acting Director, Lyman A. Jones, M.D.
Division of Sanitary Engineering,	Director and Chief Engineer, X. H. Goodnough, C.E.
Division of Communicable Diseases,	Director, Eugene R. Kelley, M.D.
Division of Water and Sewage Laboratories,	Director and Chemist, H. W. Clark.
Division of Biologic Laboratories,	Director and Pathologist, Milton J. Rosenau, M.D.
Division of Food and Drugs,	Director and Analyst, Hermann C. Lythgoe.
Division of Hygiene,	Director, Lyman A. Jones, M.D.

Public Health Council.

Allan J. McLaughlin, M.D., *Chairman.*

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State District Health Officers.

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The Eastern District,	Merrill E. Champion, M.D., Wollaston
The Northeastern District,	Arthur A. Brown, M.D., Swampscott.
The North Midland District,	Charles E. Simpson, M.D., Lowell.
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The Wachusett District,	Francis A. Finnegan, M.D., Fitchburg.
The Connecticut Valley District,	John S. Hitchcock, M.D., Northampton.
The Berkshire District,	Howard A. Streeter, M.D., Pittsfield.

PUBLIC HEALTH BULLETIN

ISSUED MONTHLY

BY THE

STATE DEPARTMENT OF HEALTH

OF MASSACHUSETTS

JULY, 1917

Vol. 4, No. 7

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass.,
under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

WAR CONSERVATION OF CHILD LIFE.

THE importance of child conservation and child welfare work has been made much more prominent, and emphasized as never before, by the present war conditions.

For this reason hearty endorsement is given to the following report prepared at the request of the General Medical Board of the Advisory Commission of the Council of National Defense by individuals representing various interests and organizations: —

WASHINGTON, D. C., June 15, 1917.

1. We urge the Council of National Defense to direct that, so far as practicable, physicians teaching obstetrics and pediatrics, and those devoting themselves exclusively to problems of maternity and of infant and child welfare, continue in such service either at home or abroad.

2. Realizing that public health nurses are essential to the carrying on of child welfare work, we recommend that every possible effort be made to prevent these especially trained nurses from being withdrawn from such work, and that public health nursing be officially recognized as war service.

3. Recognizing the increasing need for trained nurses and the inadequate number available for military and home service, we recommend, especially, efforts to enlist graduates of colleges and high schools and other suitable candidates for hospital training courses.

4. Organized volunteer aids should be enlisted to assist public health nurses and other social workers through all practicable methods of personal service. We advise appropriate courses of training for such volunteers.

5. We recommend that the council call on all communities to see to it that there is no abatement, but, on the contrary, a decided increase, in their activities along the lines of maternal, infant and child welfare, this to apply to all public and private agencies.

6. We deplore the breaking up of the home, and recommend that everywhere special provision be made to keep the mother and her young children together in the home; but this does not imply the endorsement of the home-work system.

Mothers of nursing infants should be provided for through mothers' pensions or otherwise.

Day nurseries should be especially supervised, and reference should be had to the standards of the National Federation of Day Nurseries. The highest standards should be required of all children's institutions.

7. We urge that the Council of National Defense recommend the prompt enactment of model laws for the registration of births and deaths and the re-

porting of preventable diseases in the States in which such laws do not exist, and we strongly urge their complete enforcement throughout the country.

8. We urge that every effort be made not only to prevent the repeal or relaxation of any of the existing child labor laws, but we urge, on the contrary, their more rigid enforcement, and the enactment of such further laws as may be needed.

We recommend a plan of supervision similar to that adopted by the National Child Labor Committee in Pamphlets 276 and 277.

9. For the sake of obtaining the highest possible development of child life, and as one of the best means of conserving the character and moral tone as well as physical development of the growing child, we recommend the extension and use of all sound recreational facilities.

10. Appreciating that no plan for real child conservation in war time can be developed without a serious consideration of the mentally defective child and the juvenile delinquent, and especially because of the great increase in juvenile delinquency in Europe since the war, we urge the Council of National Defense to recommend to the various States that greater facilities be created for the recognition and handling of these problems, through the schools, medical teaching, juvenile court work and children's institutions.

11. We recommend proper medical examination and supervision for boys and girls entering volunteer organizations involving physical exercise.

12. We urge as particularly important the medical examination of boys and girls before they enter industry; also subsequent medical oversight for them.

13. We recommend systematic publicity and free circulation of accredited literature on maternal, infant and child welfare. Since many organizations are distributing pamphlets and literature broadcast, some good and some poor, we recommend that a committee of obstetricians, pediatricians, sanitarians and nurses be appointed to review and standardize such literature for wider distribution.

14. We strongly endorse the measures taken by the army and navy authorities for the moral protection of the military forces, and endorse also liberal recreational facilities as an indispensable measure to that end.

15. We urge that immediate steps be taken to secure the adoption of a governmental plan to assure adequate support for soldiers and their families. This plan should include financial and medical provision, facilities for the re-education of the injured soldier, and the re-establishment of the family. Such a plan promptly put into operation would have more effect in promoting child welfare than any other measure which the government could adopt on behalf of the dependents of men in service.

16. This country should be warned by the mistake of the European countries which have allowed the milk supplies to become impaired. It should therefore take the necessary steps to prevent a milk shortage. We protest against the indiscriminate slaughter of milch cows.

17. We urge the Council of National Defense to ascertain whether there is need among the allied nations for maternity care and infant and child welfare work that can properly be performed by Americans, and if this be the case that the

council confer with suitable persons or organizations with a view to rendering such service.

18. We recommend that the Council of National Defense organize a national committee representative of maternal, infant and child welfare associations, to keep in touch during the present emergency with national problems of maternal, infant and child welfare, and to advise the Council of National Defense from time to time of such features of the then existing situation as may call for remedial action.

We recommend, further, that the Council of National Defense, through the several State councils of defense, co-operate with local organizations interested in maternal, infant and child welfare, and establish an agency or appoint an existing agency to secure information as to the specific needs of each community and to show how such needs can be adequately met.

We recommend that so much of this report as may be approved by the Council of National Defense be transmitted to the State councils of defense and to the proposed national and State committees recommended above, if such committees be created, or designated to guide them in their respective actions looking toward the conservation of maternal, infant and child welfare during the present emergency.

For the information of the Council of National Defense a list of those participating in the formulation of this report is appended.

CONFERENCE ON CHILD WELFARE,
By William C. Woodward,
Chairman.

Memorandum showing the Official Relations of the Persons participating in the Formulation of the Above Report.

Dr. F. F. Simpson, Washington, D. C., Chief of Medical Section, Council of National Defense.

Dr. William F. Snow, New York, Assistant Chief of Medical Section, Council of National Defense.

Dr. William C. Woodward, President, American Association for the Study and Prevention of Infant Mortality; Member, General Medical Board, Advisory Commission of the Council of National Defense; Health Officer, Washington, D. C.

Dr. Fritz B. Talbot, Boston, American Pediatric Society; Section on Diseases of Children, American Medical Association.

Dr. William Palmer Lucas, San Francisco, American Pediatric Society; Section on Diseases of Children, American Medical Association.

Dr. S. McHamill, Philadelphia, American Association for the Study and Prevention of Infant Mortality; American Pediatric Society.

Dr. Theodore C. Merrill, Subcommittee on Welfare, Committee on Labor, Advisory Commission of the Council of National Defense.

Dr. J. H. Mason Knox, Jr., Baltimore, American Association for the Study and Prevention of Infant Mortality.

Miss Julia C. Lathrop, Chief, Children's Bureau; Chairman, Child Welfare Committee, Woman's Committee, Advisory Commission of the Council of National Defense.

Dr. Grace L. Meigs, Children's Bureau.

Miss Mary Beard, Chairman, Committee on Nursing, Advisory Commission of the Council of National Defense; Director, Instructive District Nursing Association, Boston.

Mrs. Ellen C. Lombard, United States Bureau of Education.

Dr. William H. Davis, Chief Statistician for Vital Statistics, United States Bureau of the Census.

Miss Mary Dietzler, Washington, D. C.

Miss Gertrude B. Knipp, Executive Secretary, American Association for the Study and Prevention of Infant Mortality, Baltimore.

Mrs. William Putnam, Woman's Municipal League of Boston; Massachusetts Milk Consumers' Association; Vice-President, American Association for the Study and Prevention of Infant Mortality.

Mrs. Elmer Blair, Chairman, Public Health Department, General Federation of Women's Clubs.

Dr. Frederick R. Green, Chicago, Council on Health and Public Instruction of the American Medical Association.

Dr. Walter E. Fernald, Superintendent, Massachusetts School for the Feebleminded; Member of National Committee for Mental Hygiene.

Dr. Jessica I. Peixotto, Committee on Children, State Board of Charities and Correction of California; Professor of Social Economics, University of California.

Dr. Frank S. Churchill, Chicago, American Pediatric Society; Section on Diseases of Children of the American Medical Association; Editor, "American Journal of Diseases of Children."

ANNOUNCEMENTS.

Committee on furnishing Hospital Units for Nervous and Mental Disorders to the United States Government.

THE National Committee for Mental Hygiene has created a subcommittee on furnishing hospital units for nervous and mental disorders to the United States government, the project having been approved by Surgeon-General W. C. Gorgas of the United States Army.

This subcommittee, of which Dr. Pearce Bailey of New York is chairman, is authorized to secure the services of alienists and neurologists to be commissioned in the Officers' Reserve Corps, Medical Section, and to serve in the neuropsychiatric units which are to be attached to the base and other hospitals of the military services of the United States. Further information will be given, and application forms sent to physicians qualified in this branch of medicine, on application by letter or in person to The National Committee for Mental Hygiene, 50 Union Square, New York City.

ANNUAL NEW ENGLAND TUBERCULOSIS CONFERENCE.

The New England Tuberculosis Conference will be held at Rutland, Vt., Oct. 4 and 5, 1917.

Owing to the war and war conditions, and the consequent increase of tuberculosis, greater efforts will be necessary to control this disease. An excellent program is promised. Plan in advance to attend this meeting.

Write for further information to Harold W. Slocum, Secretary, 184 Church Street, Burlington, Vt., or to The National Association for the Study and Prevention of Tuberculosis, 105 East Twenty-second Street, New York.

PARATYPHOID VACCINE.

The State Department of Health has now prepared the mixed typhoid and A and B paratyphoid vaccine, as well as the straight typhoid vaccine. This product can be obtained by the local boards of health by stipulating when ordering that the mixed vaccine is desired.

The paratyphoid vaccine gives an immunity against paratyphoid infection that is analogous and quite comparable to the efficiency of the typhoid vaccine against typhoid infection. It is the opinion of most observers that have used the mixed vaccine that the reaction is somewhat more acute when the combined vaccines are used than is the case when the typhoid vaccine is used alone, but it is not enough more acute to be any contraindication for giving the mixed vaccine to any person in good health.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of June, 1917, samples were collected in 52 cities and towns.

There were 798 samples of milk examined, of which 230 were below the legal standard, 15 samples were skimmed milk not properly labeled, 83 samples contained added water, and 8 samples contained dirt.

There were 76 samples of food examined, of which the following were adulterated: 3 samples of canned peas which were soaked peas not properly labeled; 1 sample of maple sugar containing cane sugar; 1 sample of sausage containing starch in excess of 2 per cent.; 1 sample of ice cream containing 14 per cent. of foreign fat; and 1 sample of vinegar low in acid.

There were 14 drugs examined, of which 1 was adulterated. This was a sample of hamamelis water containing less than 15 per cent. of alcohol.

There were 26 convictions for violation of the laws, $590 in fines being imposed. Samuel London of Saugus, George H. Schaffner of Watertown and George W. Smith of Tyngsborough were convicted for violation of the milk laws. Messrs. London and Schaffner appealed their cases. The Co-operative Grocery Stores Company of Wellesley, Andrew Reeves of Lawrence, George Goldstein of North Brookfield and Edward J. Sherman of Springfield were convicted for violation of the food laws. Mr. Goldstein appealed his case. The Pharmacie Franciæ, Inc., of Lawrence and Robert E. Cashman, Harris Goldblat, Jacob Lipp, David Narwitz and Louis H. Resnek of Chelsea were convicted for violation of the drug laws. Messrs. Cashman, Goldblat, Lipp, Narwitz and Resnek appealed their cases. Homer Foskett of Dudley, Antony Polcaro, on two counts, Carl Schnell, F. Friederich, H. Gruno and Zaaval Kantrovitz of Pittsfield, Samuel Kremer, David Holtzman and Henry B. Parker of Dracut, and Hyman Jacobs of Worcester were convicted for violation of the slaughtering laws.

There were 16 confiscations made, consisting of 750 pounds of tuberculous beef, 16 pounds of tuberculous beef tongues, 30 pounds of decomposed beef, 609¾ pounds of immature veal, 225 pounds of unstamped veal, 70 pounds of decomposed pork livers, 100 pounds of decomposed carp, 165 pounds of dried-out shad, 32,200 pounds of decomposed miscellaneous fish, and 600 pounds of decomposed carrots.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

One sample of milk containing added water, produced by Fred R. Steere of Westfield; 34 samples of milk containing added water, produced by John A. Laurie of Lexington; 4 samples of milk containing dirt, and 4 samples of milk containing dirt and added water, produced by Charles R. Barker of Cochituate; 14 samples of milk containing added water, produced by Benjamin Hebert of Acushnet; 2 samples of skimmed milk not properly labeled, from Nathan Kenney of Pittsfield; 1 sample of skimmed milk not properly labeled, from Frank Zimera of Pittsfield; 2 samples of skimmed milk not properly labeled, produced by Joseph G. Medeiros of Dartmouth; 4 samples of milk containing added water, produced by Harry W. Weeks of Framingham; 1 sample of milk containing added water, produced by James Cornana of Acushnet; 10 samples of milk containing added water, produced by John Rivera of Dartmouth; 1 sample of milk containing added water, produced by John Griggs of Holliston; 1 sample of milk containing added water, produced by Charles Wilson of Medway; 1 sample of skimmed milk not properly labeled, produced by James Leland of Sherborn; 1 sample of skimmed milk not properly labeled, produced by the Winthrop Gardens of Holliston; 1 sample of skimmed milk not properly labeled, produced by Ernest L. Sands of Salem; 1 sample of skimmed milk not properly labeled, and 1 sample of milk containing added water, produced by Adam Robson of Salem; and the following brands of canned peas, which were soaked peas not properly labeled: 1 sample of "Blue Star" brand peas, from Geneseo Canning Company, Geneseo, N. Y.; 1 sample of "Our Choice" brand peas, from The Burt Olney Canning Company; Oneida, N. Y.; 1 sample of "Silver Run" brand peas, packed by A. W. Feeser & Co., Silver Run, Md.

The licensed cold-storage warehouses report the following amounts of food placed in storage during the months of April and May: 13,584,379 dozens case eggs, 313,929 pounds broken out eggs, 2,802,074 pounds of butter, 1,235,884 pounds of poultry, 4,707 pounds of game, 14,310,462¼ pounds of fresh meat and fresh meat products, and 8,470,434 pounds of fresh food fish, making a total of 40,721,869¼ pounds.

There were on hand in storage on June 1, 1917, 13,153,549 dozens of case eggs, 369,952 pounds of broken out eggs, and 1,544,756 pounds of butter, making a total of 15,068,257 pounds.

NOTE. — Upon June 13, 1917, The Great Atlantic & Pacific Tea Company of Boston was prosecuted on two counts in the Roxbury Court for the sale of soaked peas not properly labeled, and was acquitted.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF JUNE, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of June, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, . . .	720	82	220	87	331

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis, ...	325	67	258	
*Typhoid fever (Widal test), . .	142	28	112	2
Typhoid fever (culture test), . .	34	–	34	
Malaria, ...	9	–	9	
Gonorrhœa, ...	165	16	149	
Miscellaneous, ...	16			

Total number of examinations made, 1,411.

QUARTERLY REPORT UPON THE DISTRIBUTION OF BIOLOGICAL PRODUCTS AND DIAGNOSTIC OUTFITS.

The following gives the total number of biological products and diagnostic outfits distributed by the State Department of Health during the three months ending June 30, 1917: —

Biological Products.

Diphtheria antitoxin: —		
12,000 units (special for the Boston City Hospital),	979	bottles.
6,000 units (special for the Boston City Hospital),	169	bottles.
3,000 units,	10,667	bottles.
2,000 units (special for the Boston City Hospital),	192	bottles.
1,500 units,	5,499	bottles.
750 units,	1 489	bottles.
Smallpox vaccine: —		
Capillary tubes,	50,659	
Bulk,	1,700	
Typhoid vaccine: —		
Vials,	6,175	
Bulk,	19,555	
Typhoid-paratyphoid vaccine: —		
Vials,	837	
Bulk,	3,900	
Paratyphoid vaccine: —		
Vials,	165	
Bulk,	100	
Antimeningitis serum,	806	bottles.
Silver nitrate solution,	10,188	ampoules.

Diagnostic Outfits.

Culture tubes,	3,293
Sputum bottles,	1,251
Widal outfits,	631
Typhoid culture outfits,	292
Malaria-gonorrhœa outfits,	161

RÉSUMÉ OF COMMUNICABLE DISEASES FOR JUNE, 1917.

General Prevalence.

Over ten thousand (10,294) cases of communicable diseases were reported during June, a decrease of more than 1,000 compared with the cases reported in May. During June, 1916, there were reported 7,514 cases.

The diseases that show an increase over the cases reported last month are typhoid fever, pulmonary tuberculosis, cerebrospinal meningitis and poliomyelitis. Features of special interest are noted concerning the following diseases: —

Anthrax. — There were 9 cases of anthrax reported during June, making a total of 30 cases for the first six months of this year, the largest number of cases ever reported in the State for a like period. Six of the 30 cases were fatal.

Seven of the June cases were in persons who handled hides. Of these, 3 worked in the beam house or soak room of a tannery and 4 worked at unloading hides at the wharves or freight rooms. The 2 remaining cases were workers in a brush factory, and received their infection from the hair which they handled.

Cerebrospinal Meningitis. — A total of 36 cases for June is an increase over the usual number reported in the corresponding month of previous years. There were 19 cases in 1916, 19 in 1915 and 21 in 1914.

For the first six months of this year 112 cases of this disease have been reported throughout the State. For the same period in 1916 there were reported 88 cases. For several months this disease has been unusually prevalent in and about the cities of Boston, Pittsfield and Lowell. During June Springfield and the adjoining city of Chicopee also reported an unusually large number of cases.

Poliomyelitis. — This disease remains fairly well distributed throughout the State, seven communities reporting 15 cases during the month. Haverhill, where 5 cases were reported, presented the only unusual incidence.

Diseases on the Premises of Milk Handlers. — During the month there were reported 2 cases of scarlet fever in families of milk handlers. Prompt action by the families concerned, who followed instructions of the local boards of health, prevented any spread of the disease to consumers.

EPIDEMICS AND OUTBREAKS.

Smallpox. — Ten cases of smallpox, 2 of them fatal, were reported during the month, — 4 in Worcester, 2 in Shrewsbury, 2 in Fitchburg and 1 each in Blackstone and Webster. With the exception of the Blackstone case all apparently had their origin from the Worcester cases. The outbreak in Worcester, which reached its height in May, is now on the decline, and it is hoped that by next month this disease will be eliminated from the State. The source of infection of the Blackstone case is at present unknown, as the investigation has not been completed. Of the two fatal cases one had never been vaccinated, and the other was vaccinated in childhood, over fifty years ago.

Typhoid Fever. — Twenty-four of the 105 cases of typhoid fever reported during June were from Fall River, where sporadic outbreaks of unknown origin occur from time to time. Suspicious groupings of a few cases of typhoid fever in both Chelsea and Everett during the current month led the local boards of health to carry out special investigations which, however, disclosed no common source of the disease.

Diphtheria. — The outbreak of diphtheria in Malden which has been persistent for the past few months is now on the decline as a result of extensive school culturing and the weeding out of children who were found to be harboring the bacillus of diphtheria in the nose and throat. There were reported 27 cases during the month, which is quite a decrease compared with the previous months.

In Lowell diphtheria is on the increase, 59 cases being reported for June as compared with 47 during the preceding month. The cases are well scattered in all sections of the city, and no source has been found to account for the continued prevalence.

Cerebrospinal Meningitis. — An interesting neighborhood outbreak of this disease was reported from Beverly, where 4 cases successively occurred in the same house during June in four children aged nine years, seven years, twenty-one months and three months, respectively. A fifth case in a child five years of age, a playmate of the other children, was reported from a house across the street. This shows how the disease may be transmitted from one to another, and the necessity of carrying out precautions so that one child will not be the source of infection for others.

Scarlet Fever. — In Abington an investigation following the report of 8 cases of scarlet fever demonstrated that isolation was being carried out very imperfectly. Milk bottles were being left at the houses under quarantine and empty bottles collected. However, no evidence could be discovered to indicate that infection was carried through the milk.

The cases were distributed throughout the town, and the probability is that the outbreak was due to unrecognized mild cases.

In North Easton a family was found in which 6 out of 8 children had scarlet fever before a physician was called. Conditions such as these result in seeding a community and causing an epidemic.

Food Poisoning. — Following a banquet held at a Boston hotel by pupils and teachers of a Quincy school there were 170 cases of food poisoning. Only four or five of those present were not affected. None of the cases were severe, although several of the pupils and teachers were absent from school for a few days after the banquet. The symptoms were chiefly gastrointestinal, and there were no fatalities. Subsequent investigation pointed toward fish as the particular food responsible for the infection.

RARE DISEASES.

Actinomycosis was reported from Cambridge, 1.

Anterior poliomyelitis was reported from Amesbury, 1; Boston, 2; Cambridge, 2; Haverhill, 5; Springfield, 1; Sutton, 1; Worcester, 3.

Anthrax was reported from Boston, 5; Malden, 1; Peabody, 1; Salem, 1; Winchester, 1.

Cerebrospinal meningitis was reported from Beverly, 4; Boston, 6; Chelsea, 2; Chicopee, 1; Dracut, 1; Gloucester, 1; Lawrence, 1; Lowell, 1; Maynard, 1; Palmer, 1; Pittsfield, 6; Springfield, 7; Templeton, 1; Watertown, 1; Worcester, 2.

Dog bite was reported from Attleboro, 3; Brockton, 1; Lawrence, 1; Lowell, 1; North Adams, 1; Salisbury, 1; Worcester, 1.

Dysentery was reported from Boston, 4; Worcester, 1; Wrentham, 2.

Malaria was reported from Boston, 5; Brockton, 1; Brookline, 1; Dedham, 3; Erving, 4; Fall River, 1; Montague, 1.

Pellagra was reported from Chelsea, 1; Danvers, 1; Lynn, 1; Somerville, 1; Taunton, 2; Worcester, 1.

Septic sore throat was reported from Belmont, 1; Boston, 6; Brookline, 1; Chelsea, 1; Medford, 1; Newton, 1; Northbridge, 1.

Smallpox was reported from Blackstone, 1; Fitchburg, 2; Shrewsbury, 2; Webster, 1; Worcester, 4.

Tetanus was reported from Boston, 1; Springfield, 1; Winchester, 1; Worcester, 1.

Trachoma was reported from Boston, 2; Chelsea, 2; Lawrence, 2; Salem, 1.

DISTRIBUTION.

All Communicable Diseases.

	May, 1917.	June, 1917.	June, 1916.
Total cases,	11,440	10,294	7,514
Case rate per 100,000 population,	297.2	267.3	199.1

Certain Prevalent Diseases.

	May, 1917.	June, 1917.	June, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[1]
Diphtheria: —				Whitman, . . . (0) 8 Malden, . . . (9) 27 Melrose, . . . (4) 11 Lowell, . . . (12) 59 Somerville, . . (12) 22 Watertown, . . (2) 10 Fitchburg, . . (5) 14 Gardner, . . (0) 11 Springfield, . . (6) 35
Total cases, ...	876	793	555	
Case rate per 100,000 population, .	22.8	20.6	14.7	
Measles: —				Acushnet, . . (0) 18 Fall River, . . (17) 187 New Bedford, . (29) 188 Cambridge, . (115) 216 Cohasset, . . (2) 21 Hull, . . . (2) 16 Scituate, . . (1) 33 Malden, . . . (35) 100 Melrose, . . . (9) 39 Wakefield, . . (3) 42 Waltham, . . (28) 112 Watertown, . . (7) 49 Brookfield, . . (0) 50 Athol, . . . (1) 80 Clinton, . . . (4) 25 Fitchburg, . . (37) 78 West Boylston, . (1) 31 Westminster, . . (6) 35 Amherst, . . (3) 50 Conway, . . (0) 27 North Adams, . (8) 188 Pittsfield, . . (25) 190
Total cases, ...	4,211	3,785	4,187	
Case rate per 100,000 population, .	109.4	98.4	111.0	
Scarlet fever: —				Mattapoisett, . . (0) 6 Abington, . . (0) 8 Plainville, . . (0) 5 Framingham, . (0) 9 Springfield, . . (9) 34 Montague, . . (0) 8
Total cases, ...	567	412	433	
Case rate per 100,000 population, .	14.7	10.7	11.5	
Typhoid fever: —				Fall River, . . (10) 24 Cambridge, . . (3) 6 Southbridge, . . (0) 5
Total cases, ...	66	105	72	
Case rate per 100,000 population, .	1.7	2.8	1.9	
Whooping cough: —				Middleborough, . (1) 16 Lynn, . . . (0) 27 Salem, . . . (12) 52
Total cases, ...	355	328	536	
Case rate per 100,000 population, .	9.2	8.5	14.2	
Tuberculosis, pulmonary: —				
Total cases, ...	755	825	689	
Case rate per 100,000 population, .	19.6	21.4	18.3	
Tuberculosis, other forms: —				
Total cases, ...	69	66	65	
Case rate per 100,000 population, .	1.8	1.7	1.7	

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

DISEASE.	Occupation.	Locality.	Sex.	Age.	Color.
Amyl acetate poisoning,	Shoe finisher, . .	Jamaica Plain, . .	F	16	W
Anthrax, ...	Beamer, ...	Peabody, . . .	M	28	W
Anthrax, ...	Brush maker, . .	Malden, . . .	M	24	W
Anthrax, ...	Hide handler, . .	Woburn, . . .	M	53	W
Anthrax, ...	Hide handler, . .	Peabody, . . .	M	54	W
Anthrax, ...	Freight conductor, .	Greenfield, . . .	M	40	W
Anthrax, ...	Brush maker, . .	Malden, . . .	M	24	W
Anthrax, ...	Janitor, Hide Company,	Boston, . . .	M	50	W
Anthrax, ...	Brush maker, . .	Malden, . . .	F	17	W
Anthrax, ...	Hide handler, . .	Boston, . . .	M	29	W
Lead poisoning, . .	Operator, . . .	Boston, . . .	M		W
Lead poisoning, . .	Paper hanger, . .	Dorchester, . . .	M	35	W
Lead poisoning, . .	Painter, . . .	Roxbury, . . .	M	42	W
Lead poisoning, . .	Auto painter, . .	Roxbury, . . .	M	44	W

NEW LEGISLATION.

General Acts, Chapter 275.

An Act relative to the sale and distribution of certain narcotic drugs.

Be it enacted, etc., as follows:

Section 1. Except as otherwise provided in sections two and three hereof it shall be unlawful for any person, firm or corporation to sell, furnish, give away or deliver coca leaves or any cocaine or any alpha or beta eucaine or any synthetic substitute therefor, or any salts, compound or derivative thereof, except decocainized coca leaves and preparations thereof, or any opium, morphine, heroin, codeine or any preparation thereof, or any salt, compound or derivative of the same, except upon the written order of a manufacturer or jobber in drugs, wholesale druggist, registered pharmacist actively engaged in business as such, physician, dentist, veterinarian, registered under the laws of the state in which he resides, or an incorporated hospital, college or scientific institution through its superintendent or official in immediate charge, or upon the written prescription of a physician, dentist or veterinarian, registered under the laws of the state in which he resides, bearing his legal signature, the date of the signature, his office address, the registry number given him under public acts two hundred and twenty-three of the sixty-third congress, approved December seventeenth, nineteen hundred and fourteen, and the name, age and address of the patient for whom it is prescribed. The prescription, when filled, shall show the date of filling and the legal signature of the person filling it written across the face of the prescription, together with the legal signature of the person receiving any such drug and the prescription shall be retained on file by the druggist filling it for a period of at least two years. No prescription shall be filled except in the manner indicated therein, and at the time when it is received, and the full quantity of each substance prescribed shall be given. No order or prescription shall be received for filling or filled more than five days after its date of issue as indicated thereon. Any pharmacist who fills a prescription for a narcotic drug shall securely attach to the container thereof a label giving the name and address of the store in which the prescription is filled, the date of filling, the name of the person for whom it is prescribed, the name of the physician, dentist, or veterinarian who issued it; and the narcotic drug so delivered shall always be kept in its container until actually used. The prescription shall not again be filled, nor shall a copy of the same be made, except for the purpose of record by the druggist filling the same, and it shall at all times be open to inspection by the officers of the state department of health, the board of registration in pharmacy, the board of registration in medicine and the authorized agents of said departments and boards, and by the police authorities and police officers of cities and towns: *provided, however,* that the provisions of this act shall not apply to prescriptions, nor to the sale, distribution, giving away or dispensing or possession, of preparations or remedies, if such prescriptions, preparations and remedies do not contain more than two grains of opium or more than one quarter of a grain of morphine, or more than one eighth of a grain of heroin or more than one grain of codeine, or any salt, compound or derivative of any of them in one fluid ounce, or, if a solid or semi-solid preparation, in the avoirdupois ounce; nor to liniments, ointments or other preparations which are prepared for external use only, except liniments, ointments and other preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts or derivatives, or any synthetic substitute for them; *provided,* that such preparations, remedies or prescriptions are sold, distributed, given away or dispensed or held in possession in good faith as medicines and not for the purpose of evading the provisions of this act, and *provided, further,* that the possession of any of the drugs mentioned in this act, except prescriptions and preparations or remedies especially exempted in this section, by any one not being a manufacturer or jobber of drugs, or wholesale druggist, registered pharmacist, actively engaged in business as such, or a physician, dentist or veterinarian, registered under the laws of the state in which he resides, or superintendent or official in charge of an incorporated hospital, college or scientific institution shall, except as provided in section eight, be presumptive evidence of an intent to violate the provisions of this act. The provisions of this section shall not apply to persons having in their possession any of the above mentioned articles by virtue of a legal prescription legally issued as provided in this act, and not obtained by any false representation made to the physician, dentist or veterinarian issuing it, or to the pharmacist who filled it, nor shall the provisions of this act apply to decocainized coca leaves or preparations made therefrom or to other preparations of coca leaves which do not contain cocaine.

Section 2. It shall be unlawful for any practitioner of veterinary medicine or surgery to prescribe any of the drugs mentioned in section one of this act for the use of, or in such manner that it may be used subcutaneously by, a human being, and it shall be unlawful for any physician or dentist to prescribe, dispense, administer, sell, give away, or deliver, any narcotic drug to any person except when the drug is obviously and in good faith then and there needed for the treatment and cure of a disease or ailment, and not for any condition or disease directly due to any drug habit or resulting solely from the failure of an habitual user of narcotic drugs to procure the particular narcotic drug or drugs to which he is addicted.

Section 3. It shall not be unlawful for a physician personally to administer any narcotic drug at such time and under such circumstances as he, in good faith and in the legitimate practice of medicine, believes to be necessary for the alleviation of pain and suffering or for the treatment or alleviation of disease.

Section 4. Any manufacturer or jobber of drugs, any wholesale druggist, any registered pharmacist actively engaged in business as such, and any physician, dentist or veterinarian registered under the laws of the state in which he resides may sell coca leaves, cocaine or any alpha or beta eucaine or any synthetic substitute for them or any preparation containing the same, or any salts, compound or derivative thereof, or any opium, morphine, codeine, heroin or any preparation thereof, or any salt or compound or derivative of such substances, to any manufacturer or jobber in drugs, wholesale druggist, registered pharmacist actively engaged in business as such, or physician, dentist or veterinarian registered under the laws of the state in which he resides, or to any incorporated hospital, college or scientific institution, but such substances or preparations, excepting such preparations as are included within the exemptions set forth in section one, shall be sold only upon the written order of an incorporated hospital, college or scientific institution, duly signed by its superintendent or official in immediate charge, or upon a written order duly signed by such manufacturer or jobber in drugs, wholesale druggist, registered pharmacist actively engaged in business as such, or physician, dentist or veterinarian registered under the laws of the state in which he resides, and the order shall state the article or articles ordered, the quantity ordered and the date. The said orders shall be kept on file in the laboratory, warehouse, pharmacy or store in which they are filled by the proprietor thereof or his successors for a period of not less than two years after the date of delivery, and shall be at all times open to inspection by the state department of health, the board of registration in pharmacy, the board of registration in medicine and the authorized agents of said department and boards, and by the police authorities and police officers of cities and towns.

Section 5. Any manufacturer or jobber in drugs and any wholesale druggist, any registered pharmacist actively engaged in business as such, any physician, dentist or veterinarian registered under the laws of the state in which he resides, and any incorporated hospital, college or scientific institution through its superintendent or official in immediate charge that shall give an order for any of the aforesaid drugs in accordance herewith shall preserve a duplicate thereof for a period of two years after the date of giving the same, which shall at all times be open to inspection by the state department of health, members of the board of registration in pharmacy, the board of registration in medicine and the authorized agents of said department and boards, and by the police authorities and police officers of cities and towns. The order now or hereafter required by the regulations of the commissioner of internal revenue under and by virtue of said public act number two hundred and twenty-three of the sixty-third congress, shall be deemed to be a sufficient order to comply with this and the preceding section.

Section 6. Any person who, for the purpose of evading or assisting in the evasion of any provision of this act shall falsely represent that he is a physician, dentist or veterinarian, or that he is a manufacturer or jobber in drugs or wholesale druggist or pharmacist actively engaged in business as such, or that he is superintendent or official in immediate charge of an incorporated hospital, college or scientific institution, or a person registered under said public act two hundred and twenty-three of the sixty-third congress, or who, not being an authorized physician, dentist or veterinarian, makes or alters a prescription or written order for any of the narcotic drugs above mentioned, or knowingly issues or utters a prescription or written order falsely made or altered, or whoever makes any false representation or statement as to his name, age, address, or any other matter, either in writing or orally, to any physician, dentist, pharmacist, or veterinarian for the purpose of procuring a prescription for, or the delivery of, a narcotic drug, shall be deemed guilty of a violation of this act. A prescription or order that is altered, or is obtained by a false representation shall be void and of no effect.

SECTION 7. The possession of a federal certificate issued under and by virtue of said public act number two hundred and twenty-three of the sixty-third congress, by any person shall be prima facie evidence of an intent to sell, furnish, give away or deliver any of the drugs mentioned in this act.

SECTION 8. Nothing in this act shall apply to common carriers engaged in transporting the aforesaid drugs or to any employee, acting within the scope of his employment, of any person who shall lawfully be in possession, for the purpose of delivery, of any of the drugs mentioned in this act, or to any person who shall deliver any such drug, which has been prescribed or dispensed by a physician, dentist or veterinarian registered under the laws of the state in which he resides, who has been employed to prescribe for the particular patient receiving such drug, or to a nurse under the supervision of a physician, dentist or veterinarian having possession or control by virtue of his employment or occupation and not on his own account, or to the possession of any of the aforesaid drugs which have been prescribed in good faith by a physician, dentist or veterinarian, or to any United States, state, county municipal, district, territorial or insular officer or official who has possession of any of said drugs by reason of his official duties, or who, as an officer or duly appointed agent of any incorporated society for the suppression of vice, has the same in his possession for the purpose of assisting in the prosecution of violations of this act.

SECTION 9. The provisions of this act, except those sections which require the ordering of the above mentioned drugs on an official order blank and the keeping of the same on file, and the keeping of the record relative thereto, shall apply to cannabis indica and cannabis sativa, except that the same shall not apply to prescriptions, preparations or remedies which do not contain more than one half grain of extract of cannabis indica or more than one half grain of extract of cannabis sativa in one fluid ounce, or, if a solid or semi-solid preparation in the avoirdupois ounce, nor to liniments, ointments or other preparations containing cannabis indica and cannabis sativa, which are prepared for external use only.

SECTION 10. A manufacturer or jobber in drugs or wholesale druggist or registered pharmacist shall not be liable to prosecution if he fills any prescription or written order for a narcotic drug in good faith, unless he knows or has reasonable cause to suspect that the prescription or order was issued in violation of the provisions of this act, in which event any sale or delivery of a narcotic drug so made shall constitute an unlawful sale and delivery of a narcotic drug under this act.

SECTION 11. No physician, dentist, or veterinarian, and no druggist or pharmacist, either wholesale or retail, shall solicit by public advertisement or otherwise application to him for prescriptions for, or sales of, narcotic drugs, or shall publicly advertise any treatment the principal element of which consists in the administering, dispensing, furnishing, giving away or delivering of a narcotic drug, except, however, that wholesale druggists or manufacturing pharmacists may advertise in journals and publications intended for circulation among the medical profession and drug trade generally.

Section 12. All buildings, places or tenements which are resorted to by habitual users of narcotic drugs for the purpose of using such drugs, or which are used for the illegal keeping or sale of the same, shall be deemed common nuisances. Whoever keeps or maintains such a common nuisance shall be punished by a fine of not more than one hundred dollars, or by imprisonment for not more than one year.

Section 13. Whoever, not being a manufacturer or jobber of drugs, wholesale druggist, registered pharmacist, registered physician, registered veterinarian, registered dentist, nurse, acting under the direction of a physician, or an employee of an incorporated hospital acting under the direction of its superintendent or official in immediate charge, or a common carrier or messenger when transporting any drug mentioned herein between parties hereinbefore mentioned in the same package in which the drug was delivered to him for transportation, is found in possession thereof, except by reason of a physician's prescription lawfully and properly issued shall be punished by a fine of not more than one thousand dollars or by imprisonment for not more than three years in the house of correction.

Section 14. Whoever shall have in his possession a narcotic drug with intent unlawfully to sell and deliver such drug, or any part thereof, or whoever unlawfully sells, furnishes, gives away or delivers any narcotic drug in violation of the provisions of this act, shall be punished by imprisonment in the state prison for not more than three years, or in a jail or house of correction for not more than two years, or by a fine not exceeding two thousand dollars.

Section 15. It shall be unlawful for any person, not being a physician, dentist or a veterinarian, registered under the laws of this state or under the laws of the state in which he resides, wholesale druggist, manufacturing pharmacist, registered pharmacist, manufacturer of surgical instruments or any official of any government, having possession thereof by reason of his official duties, or a nurse, acting under the direction of a physician, or the employee of an incorporated hospital, acting under the directions of its superintendent or officer in immediate charge, or a carrier or messenger engaged in the transportation thereof, to have in his possession a hypodermic syringe, a hypodermic needle, or any instrument adapted for the use of narcotic drugs by subcutaneous injection. No such syringe, needle, or instrument shall be delivered or sold except to a registered pharmacist, physician, dentist, veterinarian, wholesale druggist, manufacturing pharmacist, a nurse upon the written order of a physician, or to an employee of an incorporated hospital upon the written order of its superintendent or officer in immediate charge. A record shall be kept by the person selling such instruments which shall give the date of the sale, the name and address of the person purchasing the same, and a description of the instrument. This record shall at all times be open to inspection by the state department of health, the boards of registration in medicine, dentistry, veterinary medicine, and pharmacy, by the authorized agents of said department and boards, and by the police authorities and police officers of cities and towns. Any violation of this section shall be punishable by a fine of not more than one hundred dollars, or by imprisonment in the jail or house of correction for not more than six months, or by both such fine and imprisonment.

Section 16. In a prosecution under this act for unlawfully prescribing, selling, furnishing, giving away, or delivering a narcotic drug in violation of any provision of this act, it shall be sufficient to allege that the defendant did unlawfully prescribe, sell, furnish, give away, or deliver, as the case may be, the alleged narcotic drug, without any further allegations, and without expressly negativing the different exceptions of the act, and without naming the person for whom said prescription was issued, or the amount or quantity of the drug, or the person to whom such sale, furnishing, giving away or delivery was made; but the defendant shall be entitled to a bill of particulars under the provisions of section thirty-nine of chapter two hundred and eighteen of the Revised Laws.

Section 17. The defendant in a prosecution under this act who relies for his defence and justification upon a prescription, written order, registration, appointment, or authority, as an excuse under this act, shall prove the same; and, until he has proved it, the presumption shall be that he is not so justified or authorized.

Section 18. The forms hereto annexed shall apply as well to complaints as to indictments, and such forms shall be sufficient in cases to which they are applicable. In other cases, forms as nearly like the forms hereto annexed as the nature of the case and the provisions of law will allow may be used; but any other form of indictment or complaint which is authorized by law may be used.

FORMS AND SCHEDULES OF PLEADING.

Common Nuisance. — That A. B., during the three months next before the finding of this indictment, at said [Boston], did keep and maintain a certain tenement resorted to by habitual users of narcotic drugs for the purpose of using narcotic drugs.

Unlawful Possession. — That A. B. did have in his possession unlawfully certain narcotic drugs, to wit, morphine (cocaine, heroin, or the name of drug as it is commonly known).

Unlawful Possession with Intent to sell. — That A. B. did have in his possession with intent unlawfully to sell and deliver a certain narcotic drug (naming the drug).

Conspiracy. — That A. B. and C. D. conspired together to engage in unlawful traffic in narcotic drugs.

Sale and Delivery. — That A. B. did unlawfully sell (or give away, or deliver) a narcotic drug, to wit, morphine (or name drug is commonly known by).

Unlawful Prescribing and Delivery, etc., by Physician, etc. — That A. B., a physician, (or pharmacist, dentist or veterinarian, etc.) did unlawfully prescribe (or sell, give away, furnish or deliver) a certain narcotic drug, to wit, (naming it).

Possession of Hypodermic Instrument. — That A. B. did have in his possession unlawfully a hypodermic syringe and needle.

Sale and Delivery of Hypodermic Instrument. — That A. B., did unlawfully sell (or deliver) a hypodermic syringe (or needle).

False Making of Prescription. — That A. B. did falsely make (or alter) a prescription for a narcotic drug.

Uttering a False Prescription. — That A. B. did utter and publish as true a certain false prescription for a narcotic drug, well knowing the same to be falsely made (or altered).

Misrepresentation. — That A. B. did falsely represent to C. D. (a physician, dentist, veterinarian, pharmacist, etc.) for the purpose of obtaining a narcotic drug that (state the substance of the statements claimed to be representations).

DEFINITIONS.

SECTION 19. Terms used in this chapter shall be construed as follows, unless a different meaning is clearly apparent from the language or context, or unless such construction is inconsistent with the manifest intention of the legislature: —

"Narcotic drug" shall mean cannabis indica, coca leaves, or any cocaine, or any alpha, or beta, eucaine, or any synthetic substitute for them, or any salts, compound or derivative thereof, except decocainized coca leaves and preparations thereof, or any opium, morphine, heroin, codeine, or any preparation thereof, or any salt, compound or derivative of the same.

"Physician", "practitioner of medicine", "veterinarian", "veterinary surgeon", "dentist" shall mean persons duly registered and authorized to practice medicine, veterinary medicine, surgery, and dentistry.

"Druggist", "apothecary" or "pharmacist" shall mean a person duly registered under chapter seventy-six of the Revised Laws, and actively engaged as a practitioner, or employee, in an established and fixed place of business for the sale, compounding and dispensing of drugs.

"Persons" as used herein shall include all corporations, associations, partnerships, or other aggregations of individuals, including also their agents, clerks and salesmen.

"Opium", "morphine", "heroin", "codeine" and "cocaine" as used in statutes or in complaints or indictments shall include any synthetic substitute for such drugs or any salts, compounds, derivatives, or preparations thereof, except decocainized coca leaves and preparations thereof.

SECTION 20. The repeal of any law by this act shall not affect any action, suit or prosecution pending at the time of the repeal for an offense committed, or for the recovery of a penalty, or forfeiture incurred, under any of the laws repealed.

SECTION 21. Any violation of the provisions of this act, the punishment for which is not specified herein, shall be punished by a fine of not more than one thousand dollars, or by imprisonment in a house of correction or jail for a term not exceeding one year, or by both such fine and imprisonment.

SECTION 22. Section three of chapter three hundred and seventy-two of the acts of the year nineteen hundred and eleven, as amended by section two of chapter two hundred and eighty-three of the acts of the year nineteen hundred and twelve, and chapter one hundred and eighty-seven of the General Acts of the year nineteen hundred and fifteen are hereby repealed. [*Approved May 23, 1917.*

LABORATORY AIDS FOR DIAGNOSIS AND TREATMENT OF COMMUNICABLE DISEASES.

The State Department of Health maintains, as a part of its regular work, bacteriological and biological laboratories to aid in the control and prevention of communicable diseases. The facilities of these laboratories and certain supplies furnished by them are available to physicians for the free use of residents of the Commonwealth. Upon requisition these supplies are sent to local boards of health, from whom physicians may obtain them as required.

The following, supplies are available: —

Diphtheria antitoxin, 3 sizes: 3,000, 1,500 and 750 units.
Antityphoid vaccine (3 ampoules in each set).
Smallpox vaccine.
Antimeningitis serum.
Antirabic treatment (secured by special arrangement in each case through District Health Officers).
Outfits for diphtheria cultures.
Outfits for Widal tests (typhoid fever).
Outfits for culture tests (typhoid fever).
Schick tests for determining diphtheria immunity (material on application to District Health Officers).
Outfits for prevention of ophthalmia (silver nitrate in wax ampoules).
Outfits for sputum.

The following examinations are made for diagnosis at the laboratories, the specimens being sent to the laboratories by the physicians in attendance: —

At Bacteriological Laboratory, Room 527, State House: —

Culture test for typhoid, blood (of value only in first five days).
Widal test for typhoid, blood (rarely positive before fifth day).
Culture test for typhoid, stools, urine (probable carrier cases chiefly).
Sputum for tubercle bacilli (consumption).
Pus smears for gonococci.
Blood smears for malaria.
Throat and nose cultures for diphtheria.

At Wassermann Laboratory, Harvard Medical School, Longwood Avenue, Boston, Wassermann test for syphilis: —

Specimens are received in Wassermann Laboratory when submitted by direction of the District Health Officers or local boards of health. Patients are also bled at the laboratory on Tuesdays and Thursdays from 3 to 5 P.M. There is no charge for this class of work.

In addition to the above work examinations are made for rabies, glanders and anthrax for the Department of Animal Industry. Specimens to receive attention must be submitted through direction of the Department of Animal Industry.

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.[2]		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	9	5	913	2	876	83	1762	–	360	340	4,211	47
2	Cities over 200,000.													
3	Boston,	778,500	1	–	205	1	301	34	309	–	60	88	984	20
4	Cities, 150,000-200,000.													
5	Worcester,	170,077	–	–	53	1	18	3	41	–	16	22	29	–
6	Cities, 100,000-150,000.	*570,968*	*1*	*1*	*112*	–	*155*	*16*	*466*	–	*85*	*49*	*862*	*10*
7	Fall River,	127,218	–	–	10	–	13	–	39	–	16	6	264	9
8	New Bedford,	115,272	–	–	13	–	8	2	24	–	7	5	92	1
9	Cambridge,	110,582	–	–	34	–	54	3	116	–	23	10	354	–
10	Springfield,	109,174	1	1	46	–	33	5	287	–	28	15	130	–
11	Lowell,	108,722	–	–	9	–	47	6	–	–	11	13	22	–
12	Cities, 50,000-100,000.	*511,498*	*1*	–	*154*	–	*115*	*10*	*92*	–	*46*	*41*	*345*	–
13	Lynn,	98,659	–	–	4	–	14	–	38	–	7	7	43	–
14	Lawrence,	92,187	–	–	15	–	15	4	–	–	11	6	5	–
15	Somerville,	91,102	–	–	10	–	31	4	3	–	1	5	45	–
16	Brockton,	64,668	–	–	55	–	10	–	9	–	5	10	9	–
17	Holyoke,	62,179	–	–	17	–	5	–	24	–	2	4	111	–
18	Haverhill,	51,806	–	–	16	–	13	–	7	–	14	6	16	–
19	Malden,	50,897	1	–	37	–	27	2	11	–	6	3	116	–
20	Cities and Towns, 25,000-50,000.	*498,330*	*3*	*1*	*126*	–	*105*	*8*	*149*	–	*54*	*39*	*577*	*4*
21	Chelsea,	48,273	–	–	14	–	13	–	1	–	10	5	19	–
22	Newton,	44,573	–	–	13	–	6	–	35	–	7	4	103	1
23	Quincy,	44,221	1	–	12	–	5	1	5	–	3	1	9	–
24	Pittsfield,	42,913	–	–	6	–	10	3	26	–	3	3	196	2
25	Fitchburg,	40,464	–	–	16	–	6	1	2	–	4	2	37	–
26	Salem,	39,872	–	–	4	–	2	–	1	–	4	3	3	–
27	Everett,	39,588	1	1	24	–	18	2	7	–	8	3	28	–
28	Taunton,	37,001	–	–	1	–	1	–	1	–	1	4	5	1
29	Brookline,	36,007	–	–	25	–	2	–	21	–	3	2	54	–
30	Medford,	33,758	–	–	3	–	9	1	16	–	3	4	65	–
31	Chicopee,	32,230	1	–	2	–	9	–	20	–	2	1	5	–
32	Waltham,	31,179	–	–	6	–	10	–	14	–	5	4	51	–
33	Revere,	28,251	–	–	–	–	14	–	–	–	1	3	2	–
34	Cities and Towns, 10,000-25,000.	*569,407*	–	*1*	*99*	–	*88*	*4*	*209*	–	*67*	*45*	*711*	*6*
35	Beverly,	24,863	–	–	5	–	–	–	7	–	2	1	7	–
36	Gloucester,	24,513	–	–	–	–	–	–	4	–	–	3	7	–
37	Northampton,	22,636	–	–	3	–	1	–	8	–	2	4	93	–
38	North Adams,	22,042	–	–	2	–	–	–	–	–	4	1	158	2
39	Peabody,	19,908	–	–	2	–	4	–	–	–	5	3	3	–
40	Attleboro,	19,480	–	–	7	–	11	–	11	–	1	1	12	–
41	Westfield,	19,456	–	–	3	–	1	–	14	–	2	3	5	–
42	Watertown,	18,123	–	–	6	–	12	–	1	–	–	–	29	–
43	Leominster,	17,675	–	–	3	–	1	–	–	–	2	2	5	–
44	Melrose,	17,394	–	–	5	–	1	–	19	–	5	1	18	1
45	Framingham,	17,146	–	–	25	–	2	1	50	–	–	1	10	–
46	Gardner,	17,116	–	–	–	–	9	1	1	–	–	–	11	–
47	Woburn,	16,896	–	–	1	–	2	–	8	–	–	1	38	–
48	Arlington,	16,524	–	–	–	–	4	–	6	–	–	1	18	–
49	Marlborough,	15,546	–	–	4	–	3	–	3	–	4	2	1	–
50	Newburyport,	15,470	–	–	–	–	3	–	2	–	–	–	79	–
51	Methuen,	15,137	–	–	1	–	2	–	–	–	2	1	1	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and

[2] Made reportable May 1, 1917.

TO THE PUBLIC HEALTH,[1] MAY, 1917.

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28-29 Tuberculosis, Pulmonary.		30-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		100 Septic Sore Throat.		5 Smallpox.		75A Trachoma.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
1,158	–	225	1	567	11	755	440	69	75	66	9	355	22	23	22	21	4	27	4	13	–	1
																						2
234	–	110	1	134	4	241	92	18	16	11	2	71	3	7	6	8	1	–	–	7	–	3
																						4
16	–	12	–	31	2	36	29	1	7	–	–	15	2	–	2	–	–	22	4	1	–	5
147	–	*34*	–	*57*	*2*	*148*	*80*	*14*	*13*	*14*	*2*	*43*	*2*	*6*	*3*	*2*	*2*	–	–	*1*	–	6
12	–	10	–	8	1	44	19	3	3	4	1	16	2	–	–	–	–	–	–	–	–	7
8	–	9	–	11	–	43	12	2	1	2	–	11	–	–	–	1	1	–	–	–	–	8
47	–	6	–	9	–	24	22	1	2	2	–	8	–	2	–	1	–	–	–	–	–	9
78	–	5	–	22	1	15	9	5	1	3	1	5	–	–	–	–	1	–	–	–	–	10
2	–	4	–	7	–	22	18	3	6	3	–	3	–	4	3	–	–	–	–	1	–	11
218	–	*21*	–	*88*	*2*	*75*	*51*	*7*	*10*	*10*	*1*	*43*	*7*	*1*	*2*	–	–	–	–	*1*	–	12
8	–	1	–	28	2	10	8	1	2	4	1	12	2	1	1	–	–	–	–	–	–	13
2	–	1	–	3	–	13	15	4	5	2	–	10	1	–	–	–	–	–	–	1	–	14
3	–	3	–	13	–	12	10	–	–	2	–	1	–	–	1	–	–	–	–	–	–	15
178	–	5	–	–	–	10	3	1	–	1	–	5	1	–	–	–	–	–	–	–	–	16
–	–	2	–	17	–	9	5	–	3	–	–	–	–	–	–	–	–	–	–	–	–	17
1	–	6	–	14	–	14	4	1	–	1	–	10	2	–	–	–	–	–	–	–	–	18
26	–	3	–	13	–	7	6	–	–	–	–	5	1	–	–	–	–	–	–	–	–	19
163	–	*13*	–	*69*	–	*99*	*45*	*14*	*10*	*6*	–	*76*	*1*	*7*	*6*	*2*	–	*2*	–	*1*	–	20
9	–	7	–	7	–	15	6	3	–	–	–	5	–	1	–	1	–	–	–	1	–	21
46	–	–	–	2	–	4	1	1	1	2	–	–	–	–	–	–	–	–	–	–	–	22
19	–	–	–	2	–	5	9	1	1	–	–	9	1	–	–	–	–	–	–	–	–	23
5	–	1	–	5	–	12	3	–	–	–	–	6	–	4	3	–	–	–	–	–	–	24
17	–	–	–	8	–	13	1	3	1	–	–	1	–	–	–	–	–	2	–	–	–	25
3	–	2	–	3	–	4	6	3	1	1	–	39	–	–	–	–	–	–	–	–	–	26
19	–	2	–	9	–	7	2	–	–	3	–	6	–	–	–	–	–	–	–	–	–	27
–	–	–	–	5	–	6	7	–	–	–	–	–	–	–	–	1	–	–	–	–	–	28
19	–	–	–	7	–	5	–	2	2	–	–	7	–	–	–	–	–	–	–	–	–	29
14	–	–	–	5	–	2	3	–	2	–	–	–	–	–	–	–	–	–	–	–	–	30
–	–	1	–	2	–	14	3	1	1	–	–	2	–	–	1	–	–	–	–	–	–	31
12	–	–	–	5	–	6	3	–	1	–	–	1	–	1	1	–	–	–	–	–	–	32
–	–	–	–	9	–	6	1	–	–	–	–	–	–	1	1	–	–	–	–	–	–	33
142	–	*19*	–	*91*	–	*73*	*54*	*12*	*9*	*14*	*1*	*57*	*5*	*1*	*1*	*8*	*1*	*2*	–	*1*	–	34
1	–	2	–	–	–	–	3	–	–	1	–	5	–	–	–	2	–	–	–	–	–	35
–	–	1	–	–	–	4	4	3	1	3	–	–	–	–	–	–	1	–	–	–	–	36
13	–	–	–	5	–	8	4	–	1	–	–	1	–	–	–	–	–	–	–	–	–	37
–	–	–	–	7	–	1	2	–	–	–	–	–	–	1	–	–	–	–	–	–	–	38
–	–	1	–	3	–	2	–	1	–	–	–	4	1	–	–	–	–	–	–	–	–	39
19	–	–	–	2	–	1	5	–	–	1	–	11	–	–	–	1	–	–	–	–	–	40
2	–	2	–	6	–	4	5	–	–	1	–	–	–	–	–	–	–	–	–	–	–	41
–	–	–	–	4	–	4	2	–	–	1	–	1	–	–	–	–	–	–	–	–	–	42
–	–	2	–	4	–	4	1	1	–	1	1	–	–	–	–	–	–	–	–	–	–	43
1	–	2	–	1	–	2	1	–	–	–	–	–	–	–	–	3	–	–	–	–	–	44
41	–	1	–	3	–	3	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	45
5	–	–	–	2	–	4	3	–	–	2	–	–	–	–	–	–	–	–	–	–	–	46
2	–	–	–	3	–	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	47
–	–	–	–	5	–	2	1	–	–	1	–	–	–	–	–	2	–	–	–	–	–	48
2	–	–	–	1	–	6	2	2	–	–	–	3	–	–	–	–	–	–	–	–	–	49
2	–	–	–	2	–	1	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	50
1	–	–	–	2	–	1	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	51

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correction, the deaths given above, while approximately correct, are not absolutely complete.

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge, ...	14,930	–	–	1	–	–	–	–	–	1	–	–	–
53	Weymouth, ...	14,444	–	–	–	–	–	–	–	–	1	**3**	1	–
54	Milford, ...	13,962	–	–	2	–	4	–	–	–	4	**1**	–	–
55	Winthrop, ...	13,918	–	–	2	–	2	–	14	–	3	**3**	7	–
56	Greenfield, ...	13,590	–	–	14	–	1	–	17	–	5	**1**	104	**3**
57	Wakefield, ...	13,389	–	**1**	–	–	2	–	–	–	3	–	2	–
58	Adams, ...	13,302	–	–	–	–	–	–	2	–	–	–	4	–
59	Plymouth, ...	13,273	–	–	–	–	1	–	–	–	1	**1**	1	–
60	Clinton, ...	13,243	–	–	–	–	1	–	1	–	9	**2**	17	–
61	Webster, ...	13,031	–	–	–	–	6	**1**	–	–	2	**4**	–	–
62	Norwood, ...	12,286	–	–	2	–	4	–	11	–	4	–	4	–
63	West Springfield, ...	12,273	–	–	–	–	–	–	2	–	–	**2**	–	–
64	Danvers, ...	11,955	–	–	6	–	2	–	6	–	–	**1**	1	–
65	Dedham, ...	11,820	–	–	1	–	4	**1**	1	–	1	–	–	–
66	Natick, ...	11,673	–	–	–	–	1	–	–	–	2	**1**	6	–
67	Saugus, ...	11,189	–	–	–	–	–	–	–	–	–	–	–	–
68	Easthampton, ...	10,430	–	–	–	–	1	–	–	–	–	–	8	–
69	Athol, ...	10,333	–	–	1	–	1	–	–	–	1	–	58	–
70	Winchester, ...	10,312	–	–	–	–	2	–	20	–	1	–	3	–
71	Bridgewater, ...	10,129	–	–	3	–	–	–	1	–	–	**1**	–	–
72	TOWNS, 5,000-10,000.	*355,823*	*1*	*1*	*115*	–	*52*	*4*	*249*	–	*16*	*24*	*255*	*4*
73	TOWNS, 2,500-5,000.	*181,232*	–	–	*35*	–	*18*	*1*	*111*	–	*11*	*12*	*231*	*3*
74	TOWNS UNDER 2,500.	*213,171*	*2*	*1*	*14*	–	*23*	*3*	*136*	–	*5*	*17*	*216*	–
75	STATE INFIRMARY, ...		–	–	–	–	1	–	–	–	–	**3**	1	–

In addition to the above there occurred 12 cases of anthrax, 2 in Boston, 1 in Chelsea, 1 in Greenfield,
treatment), 1 in Attleboro, 1 in Boston, 1 in Lawrence, 3 in Lowell and 1 in North Adams; 2 cases of dys-
bridge, 1 in Canton, 1 in Hull, 1 in Newton and 1 in Wellesley; 1 case of tetanus in Peabody, with 1 death
1 in Boston and 1 in Springfield.

TO THE PUBLIC HEALTH — *Concluded.*

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28-29 Tuberculosis, Pulmonary.		30-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough		61A Cerebrospinal Meningitis.		100 Septic Sore Throat.		5 Smallpox.		75A Trachoma.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	52
-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	53
2	-	-	-	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	54
7	-	1	-	5	-	-	1	1	-	-	-	11	1	-	-	-	-	-	-	-	-	55
18	-	1	-	12	-	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56
-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	57
-	-	1	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58
-	-	1	-	1	-	1	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	59
1	-	-	-	1	-	1	1	1	1	-	-	-	2	-	-	-	-	-	-	-	-	60
1	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	2	-	-	-	61
1	-	2	-	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63
3	-	2	-	2	-	1	1	1	1	-	-	8	-	-	-	-	-	-	-	-	-	64
3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65
3	-	-	-	2	-	1	-	1	-		-	-	-	-	-	-	-	-	-	-	-	66
-	-	-	-	-	-	-	-	-	1			-	-	-	-	-	-	-	-	-	-	67
-	-	-	-	-	-	3	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	68
-	-	-	-	9	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69
11	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	70
3	-	-	-	2	-	1	1	-	-	-	-	10	-	-	-	-	-	-	-	-	-	71
126	-	*10*	-	*38*	*1*	*32*	*28*	*3*	*3*	*4*	*2*	*31*	*1*	*1*	*2*	-	-	-	-	*1*	-	72
20	-	*2*	-	*22*	-	*19*	*11*	-	*4*	*2*	-	*12*	-	-	-	*1*	-	*1*	-	-	-	73
92	-	*4*	-	*33*	-	*13*	*26*	-	*1*	*5*	-	*7*	*1*	-	-	-	-	-	-	-	-	74
-	-	-	-	*4*	-	*19*	*24*	-	*2*	-	*1*	-	-	-	-	-	-	-	-	-	-	75

1 in Lynn, 1 in Salem and 6 in Woburn, and 1 death in Boston; 7 cases of dog bite (requiring antirabic
entery, 1 in Boston and 1 in Northampton, and 1 death in North Adams; 5 cases of malaria, 1 in Cam-
1 case of pellagra in Boston, with 2 deaths, 1 in Lowell, and 1 in the State Infirmary; and 2 cases of leprosy

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PUBLIC HEALTH BULLETIN

ISSUED MONTHLY

BY THE

STATE DEPARTMENT OF HEALTH

OF MASSACHUSETTS

AUGUST, 1917

Vol. 4, No. 8

ALLEN J. McLAUGHLIN, M.D., *Commissioner*.

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass.,
under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

CANCER.

THE figures of the United States Census mortality returns indicate that deaths from cancer are increasing in many districts in this country, numbering 80,000 and over in the United States and Canada in 1914. Competent investigators estimated that in that year 1 woman in 8 of those over thirty-five died of cancer, and 1 man in 14.

In Massachusetts in 1914 there were 3,586 deaths from this disease. Without further discussion these figures demonstrate the magnitude of the cancer problem, and the great importance of employing measures to reduce these figures.

At the present time there is no definite knowledge as to the cause of cancer, though various theories have been advanced, and many investigators are constantly engaged with the problem. Fortunately, however, as is the case with some other diseases of which we are still in ignorance as to the exact cause, there are measures of proven efficiency which may be employed to combat the increase of cancer.

In this connection should be emphasized the reassuring fact that cancer is not contagious, this being the unanimous opinion of practically all workers and investigators concerned with this disease.

It is now well established that the majority of cases of cancer can be prevented by suitable operative measures if the condition is recognized promptly at its onset and such measures are promptly employed. Surgical measures late in the disease are at best merely palliative.

The onset of cancer is usually insidious. There is no pain associated with its beginning. Pain is a late symptom, occurring when the growth has become so extensive as to render measures for relief impracticable. At first it starts in one small spot, and from that point gradually and steadily spreads till later it reaches a point where its removal is impossible.

It is important that all, physicians as well as the laity, should keenly grasp and realize the foregoing simple statements, and act in accordance with them. For those who realize the importance of what has been said, it means that a competent physician should be immediately consulted by persons thirty-five years of age and over —

1. Whenever there is any persistent sore, ulceration and hardening of the skin.

2. Whenever moles and warts show a tendency to ulcerate, to bleed or to increase in size.

3. Whenever sores, thickenings, or ulcers of the tongue and mouth are present.

4. Whenever there are tumors or swellings of any organ or part of the body, especially of the female breast.

5 Whenever, in females, there is irregular or increased monthly flowing, and especially if the flow begins again in any degree after the change of life.

6. Whenever there is any abnormal discharge of blood from the bladder or rectum.

7. Whenever gastric or intestinal indigestion, accompanied with progressive loss of weight, exists, careful investigation is demanded by a skillful physician by all the modern methods available, including the X-ray.

FREE DIAGNOSIS OF PATHOLOGICAL MATERIAL.

THE State Department of Health takes pleasure in making the following announcement, made possible through the kindly offer of the Cancer Commission of Harvard University.

On and after Oct. 1, 1917, with the co-operation of the Cancer Commission of Harvard University, the State Department of Health of Massachusetts will be able to offer to the registered physicians of the State the opportunity for the free diagnosis of pathological material removed at operation. This service is already provided in a number of States by the laboratories of State universities or by the departments of public health. It is believed that a material decrease in the number of advanced and inoperable cases of cancer, and a considerable increase in the accuracy of diagnosis of cancer and other tumors, will result from the institution of this service.

Specimens submitted for examination will be received at the laboratory of the Cancer Commission, at the Medical School of Harvard University, Longwood Avenue, Boston. This service will be under the direction of Prof. James Homer Wright, M.D., S.D., pathologist of the Massachusetts General Hospital. Reports will be forwarded by mail or telegram to the attending physician.

The practice of cutting through sound tissue into cancer tissue in order to remove a fragment for subsequent microscopic examination is generally condemned, on the ground that such a procedure leads to a rapid spread of the disease, and usually deprives the patient of his one chance of cure by radical operation. When doubt exists as to the nature of the tumor which is deeply placed, after all other resources of diagnosis, such as the X-ray, the Wassermann reaction, the blood examination, and competent consultation have been exhausted, the resources of some hospital or institution equipped for immediate frozen section diagnosis should be sought, and the operation should be completed under one anæsthesia. Thus lesions which are suspected to be malignant may be divided arbitrarily into two groups, as follows: —

Group 1. — Lesions which are superficial or ulcerated, as those of the external skin, the mouth, tongue, palate, larynx, œsophagus, rectum, bladder and cervix of the uterus. In such cases the whole lesion should be removed in preference to cutting into the suspected tissue. Where total removal would cause so much mutilation as to be unjustified on a doubtful diagnosis, facilities for a frozen diagnosis should be obtained in order that the radical operation may be completed immediately if malignant disease is discovered. The cautery should be used in these cases to seal the lymphatics while waiting for the report of the pathologist. This caution applies also to suspected carcinoma of the body of the uterus, and immediate frozen section diagnosis of the material obtained with the curette should be made available, and the radical operation, if necessary, performed under one anæsthesia. In but few cases is the exploratory removal of a fragment of tissue to be sent for a subsequent pathological examination justified. When no other recourse is open to the physician, however, the specimen should be removed with the cautery, or the cautery should be used immediately to seal the tissue spaces.

Group 2. — Lesions which are deeply placed, and covered by sound tissue, as those of the breast, the salivary glands, thyroid, stomach, intestine, gall bladder, kidney, ovary, testicle and tumors of the subcutaneous tissues, lymph nodes, bones, fasciæ and muscles. In such cases the exploratory incision into the suspected tumor tissue is *never* justified unless the frozen section diagnosis is available, and even then the radical operation, without exploratory incision, is usually safest for the patient. Especially is this true in the case of tumors of the breast.

Benign tumors and diseases which are recognized as particularly liable to malignant development should be removed entire, and the tissues submitted for confirmation of the diagnosis by pathological examination. Among these conditions may be included the benign tumors and chronic diseases of the breast, ovarian cysts, papillomata of the rectum and anus, polyps of the uterus, rectum and lary x, and pigmented moles, nævi, warts, fissures and chronic ulcerations of the external skin, especially those which show a tendency to ulceration, bleeding or gradual increase in size.

Containers and full directions for the preservation and shipment of specimens for diagnosis may be obtained from the State District Health Officer. These officers are stationed as follows: —

Dr. Adam S. MacKnight, 355 North Main Street, Fall River.
Dr. Merrill E. Champion, 50 Phillips Street, Wollaston.
Dr. Arthur A. Brown, Willey House, Swampscott.
Dr. Charles E. Simpson, 100 Holyrood Avenue, Lowell.
Dr. George T. O'Donnell,[1] 768 Main Street, Waltham.
Dr. Francis A. Finnegan, 14 Longwood Avenue, Fitchburg.
Dr. John S. Hitchcock, 160 Main Street, Northampton.
Dr. Howard A. Streeter, 740 Dalton Avenue, Pittsfield.

A card will be provided which must be filled out by physicians desiring to avail themselves of this service. Reports will go in duplicate to the physician and to the Health Officer of the district, and any questions raised by the pathological report will be discussed by letter or by personal interview with the Director of the State Diagnosis Service during his office hours, Monday, Wednesday and Friday, 4 to 5 P.M., Cancer Commission, Medical School of Harvard University, Building E, Longwood Avenue, Boston.

VITAL STATISTICS.

THE value of vital statistics depends wholly upon their *accuracy* and *completeness*. That certificates of death are often incomplete and inaccurate is generally known. The possible extent of error in such return is shown in the accompanying paper by Dr. Arthur Reed Perry of the United States Department of Labor, and lends special emphasis to the request of the Director of the Bureau of the Census, which appears later, for more accurate and definite statements regarding the occupations of decedents, especially of those dead from tuberculosis.

Dr. Perry's paper, "Errors in Death Registration," was prepared for the "Monthly Review" of the United States Bureau of Labor Statistics of July of this year.

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[1] Temporary Acting State District Health Officer.

DEATH REGISTRATION ERRORS IN FALL RIVER.

BY ARTHUR REED PERRY, M.D.

The value of vital statistics is coming to be generally appreciated, and the desirability of extending the registration area as rapidly as possible is being insisted upon more and more. No one could desire to minimize the importance of a complete registration of births and deaths, but in the course of some recent investigations into the prevalency and contributory causes of early death in the cotton manufacturing industry, the writer has come across facts which make him feel that a large part of the present interest in mortality matters might be quite as profitably directed to increasing the accuracy as to extending the field of death registration.

These investigations were carried on in Fall River, Mass., for the purpose of obtaining facts as to the death hazard of male and female cotton operatives of each workroom occupation as compared with the corresponding hazard of persons of like age and sex who are not cotton operatives. The underlying idea of the studies is that "accurate age group mortality statistics of a given occupation as expressed in death rates per 1,000 of each specified population constitute the only indisputable evidence as to the healthfulness or unhealthfulness of that occupation to the persons engaged in it."[1] The earlier of these studies, covering the period from 1905 to 1907, inclusive, has already been published.[1] The second and more intensive supplementary one, which is to appear at an early date, covers the succeeding five years. The two, therefore, cover the Fall River mortality within age period ten to sixty-four years for a period from 1905 to 1912, inclusive. This is roughly the volume equivalent of the deaths of an almost exclusively industrial city of a million people for the period of a single year.

In order to secure the accurate data required, the official certificates of all deaths, aggregating nearly 7,000, that had occurred within the periods covered were first copied by employees from the registrar's office. Visits were then made to the latest Fall River residence of each decedent, where the information of the death certificate was supplemented with fuller details gained from relatives, or, if there were none of these, from friends of the deceased, respecting the latter's family, habits as to drug addiction, occupational and conjugal experiences, exposure to communicable disease, and other facts of possible significance in explaining why the investigated wage earner had died prematurely.

Error in Official Registration of Death. — Though this inquiry at the home respecting the circumstances accompanying the early ended life of the decedent had been at first designed solely to provide data supplementary to the explanation of the death furnished by the official certificate, nevertheless, at an early stage of the investigation it became evident that these official records contained errors as to facts, and also omissions of facts, which in their results were almost as misleading as actual misstatements.

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[1] Causes of Death among Woman and Child Cotton Mill Operatives. Vol. XIV. of Condition of Woman and Child Wage Earners, Senate Document No. 645, 61st Congress, 1st session, 1912. Pp. 430.

These errors were of three kinds, — the actual cause of death might be misstated; the immediate cause of death might be given accurately, but the existence of other debilitating factors which probably had much to do with bringing about death at that time might be passed over unrecorded; and the decedent's occupation might be incorrectly given. The first of these errors appeared most numerously in cases in which tuberculosis was the real though not the recorded cause of death; it also played an important part in concealing the number of deaths due to childbirth. The second also was found in connection with parturition cases. The third affected both operatives and non-operatives, though in differing degrees, some of each class being assigned to the other. The extent to which each of these errors prevailed, and the degree to which it was possible to correct the misleading data, will be discussed somewhat fully.

Error in the Official Record of Deaths from Tuberculosis. — There can be no doubt that the tuberculosis rate was diminished by inaccurate statement of the cause of death on the official certificate. In a number of cases a marked variance was found between the apparently superficial cause of death certified to by the physician, and the probable basic cause suggested by the history of the decedent's illness as reported by relatives. Thus in cases in which the physician's certificate gave some such equivocal cause[1] of death as bronchitis[2] or hemorrhage, or some terminal condition, such as broncho-pneumonia or heart failure or debility, relatives of the decedent testified that for possibly a year or more before death the decedent had had a bad cough, had expectorated profusely, had become extremely emaciated, had suffered from night sweats, had had one or several hemorrhages of bright blood, and was the second or third in the family who had "died of consumption" within the last few years, or had parents one or both of whom had died long ago after years of such tuberculous manifestations. Such testimony as to matters of simple fact seems entitled to considerable credence.

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[1] The physician who had signed such death certificates with no mention of tuberculosis as a death cause, later, upon having been asked by the writer, "What sort of a case was Blank's?" stated (upon a date and in words recorded upon the spot) that the decedent had died from tuberculosis. Quite independently, however, of the physician's correction of the certificate, the very history of the cases (reported nearly always by the next of kin) is strongly suggestive of tuberculosis. Nevertheless, excepting cases registered by a board of health or at a hospital as tuberculosis, no questionably tuberculous case (*i.e.*, no case uncertified as tuberculous officially) has in this study been scheduled as tuberculous without the physician's correction of his own certificate if he could sufficiently recall the case. Nor, even if the certifying physician did not recall the case, had quit the city or had died, has the case been scheduled herein as tuberculous, unless one or more other physicians who had attended the individual in the last illness stated to the writer that the case was one of tuberculosis.

[2] A French Canadian woman aged twenty-three years, married four years but never pregnant, for seven years a spinner until she left the mill because of cough two years before death, was certified by her attending physician (now dead) as having died from "bronchitis." Another attending physician whose name is upon death certificates of two other family members did not "recall" this case. The seemingly tuberculous mother and brother of decedent affirmed that the latter had died from tuberculosis, "just as her father and three sisters did." These last-mentioned four are certified as having died tuberculous between March, 1910, and August, 1912, and are so recorded in this study. This case is scheduled everywhere as non-tuberculous. Another sister was recommended to a tuberculosis hospital in October, 1909, and is said to have recovered.

A mother, in describing her daughter's fatal illness that had been certified as non-tuberculous, mentioned that the doctor in attendance had told her the malady was "consumption," and that he could do little else than ameliorate some of the more immediately distressing symptoms. One spooler-room girl whose sister had died the previous year of tuberculosis, and who herself had become greatly emaciated after a year's cough, while on her way home from the cotton mill one night succumbed to a fatal attack of hemorrhage. Her death certificate reported "hemorrhage of the stomach" as the cause of death.

A special canvass was made to see just how commonly tuberculosis was misreported on the official death certificate. There were 188 cases in which there was marked discrepancy between the cause of death as given on the death certificate and the cause of death suggested by the history of the decedent's illness as given by the family. As stated above, every physician who had signed one of these 188 certificates, if still living and still in Fall River, was visited and questioned about the death. By this process the probable correctness of the certified cause was satisfactorily established concerning 31 of these cases.

In 65 of the remaining 157 cases no further information was obtainable because the certifying physician had either died or left Fall River, or else professed inability to remember, and no other attending physician could be found. In no few of these 65 cases the histories indicated overwhelmingly that these deaths were due to tuberculosis, yet even in these cases it was felt that unless an admission was secured from the physician that the recorded cause of death was incorrect, the statement of the certificate should be taken as correct. Consequently these 65 cases have been excluded from the count of official errors. But the remaining 92 are either admittedly or demonstrably cases of tuberculous deaths. These have therefore been classed as tuberculous throughout this study. The 92 may be divided into the following classes: —

1. Those in which the certifying physician unequivocally stated the cause of death to be tuberculosis. These numbered 70.

2. Those unequivocally vouched for as tuberculous by a physician who had attended the decedent in his last illness, but had not signed the death certificate. Recourse was had to these other physicians only because in every one of these cases the physician who had signed the certificate had either died, left Fall River or forgotten all about the case. This forgetfulness is explained by the fact that the signers of the certificate were sometimes city physicians who had responded to an emergency call, and possibly had seen the decedent professionally only once. These cases numbered 12.

3. Those who, after a sputum examination, had been recorded on city or hospital records as tuberculous. Of these there were 5.

4. Those stated by the certifying physician to have been "tuberculous probably." Two of these had not been certified as tuberculous because no bacteriological examination of the sputum had been made. "And so," said the physician concerning one of these, "though I knew the case was tuberculosis I couldn't actually swear it was." This group likewise numbered 5.

As a result of this special canvass it appears that not improbably one-sixth (17 per cent.) of all the fatal tuberculosis in the city was misreported under non-tuberculous diagnoses. The admitted error amounted to 19 per cent. in the case of the French Canadians dying of tuberculosis, and to 10 per cent. (92 out of 899 cases) in such deaths of the general population of all races.

The distribution by sex, age, race and occupation of the 92 decedents who were thus found admittedly to be really victims of tuberculosis, though not so recorded on the death certificate, is as follows: —

SEX AND AGE.	FRENCH CANADIANS.		IRISH.		ALL OTHER RACES.		ALL RACES.		
	Operatives.	Non-operatives.	Operatives.	Non-operatives.	Operatives.	Non-operatives.	Operatives.	Non-operatives.	Both Classes.
Males: —									
10 to 14,	–	–	–	–	–	1	–	1	1
15 to 44,	12	6	–	4	4	5	16	15	31
45 to 64,	1	7	–	1	–	1	1	9	10
65 years and over,	–	–	–	–	–	–	–	–	–
Total,	13	13	–	5	4	7	17	25	42
Females: —									
10 to 14,	–	1	–	–	–	1	–	2	2
15 to 44,	12	5	7	3	1	4	20	12	32
45 to 64,	1	6	–	4	1	4	2	14	16
65 years and over,	–	–	–	–	–	–	–	–	–
Total,	13	12	7	7	2	9	22	28	50
Both sexes: —									
10 to 14,	–	1	–	–	–	2	–	3	3
15 to 44,	24	11	7	7	5	9	36	27	63
45 to 64,	2	13	–	5	1	5	3	23	26
65 years and over,	–	–	–	–	–	–	–	–	–
Total,	26	25	7	12	6	16	39	53	92

It will be seen that by far the largest proportion of these cases (55 per cent.) occur among the French Canadians, who form but one-quarter (24 per cent.) of the population. The Irish and French Canadians together make up not far from four-fifths (77 per cent.) of the whole number of these variant cases.

The question, of course, arises why the true cause should be so often ignored or misleadingly reported on the death certificate. There seem to be several reasons for this. Some persons are sensitive as to the existence of a case of tuberculosis in their family, and would seriously object to having such a cause recorded upon a certificate. The knowledge that this feeling is common may affect the physician even in cases where no such prejudice exists. But apparently by far the most effective reason is the reported attitude of some of the insurance companies which in the past have delayed payment of policies of decedents officially certified as having died from tuberculosis and which now not uncommonly hesitate to insure other members of the family of such a decedent. Physicians when asked about these variant cases occasionally admitted that the certificates were designedly misleading, but justified them on the ground of personal financial expediency arising from intense medical competition, and on the added ground that sometimes only through such registration practices could the decedent's family secure promptly the amount they seemed entitled to from the insurance companies.

Errors in the Official Record of Deaths from Parturition. — Here, as in connection with deaths from tuberculosis, cases were found in which the record was absolutely false, — cases in which investigation proved the death to have been really due to childbirth, but in which the official certificate gave some equivocal or designedly misleading term to designate the cause. But in addition to this, certificates of female decedents were often seriously defective in that they failed to give parturition as a contributory cause of death even when a pregnancy had terminated within so short a period before the death that it could hardly have failed to be a very important factor in bringing it about. Since the death certificate is supposed to give the contributory as well as the main cause of death, it is evident that such an omission may have almost as misleading effects as the failure to designate properly the principal cause of death. Indisputably these omissions have served to obscure the real risks involved in pregnancy.

To take up first the cases in which the official certificates contained absolutely erroneous statements as to the cause of death. In 34 cases in which death was immediately and indisputably the direct consequence either of parturition or of its gross mismanagement, the death record contained not the slightest intimation that pregnancy or childbirth had been in any way the cause or even a contributory cause of death. These cases formed one-fourth (26 per cent.) of the actual parturition cases[1] occurring in Fall River during the period of this study.

Of these 34 cases 11 died from puerperal septicæmia, 5 from puerperal nephritis (*i.e.*, eclampsia), 7 from puerperal hemorrhage, 4 from embolism, 1 from shock coincident with childbirth, and 4 from pneumonia ending within ten days after the birth of a full-term baby. As it was not claimed that any one of these four cases had any pulmonary symptoms other than fever, and as the certifying physician was one who had admitted misregistration of cases of tuberculosis, it is overwhelmingly probable that these four cases were actually puerperal septicæmia. And finally, two cases were officially reported under miscellaneous designations, each obviously having been speedily fatal through parturition.

In these 34 cases the proof that the death was really due to pregnancy or parturition was so strong that the official certificate has been disregarded, and the deaths have been classed as due to parturition.

In 26 other cases in which a pregnancy had terminated within thirty days of the death, the certificate contains no mention of either pregnancy or parturition as even a contributory cause of death, and indeed gives no intimation that such a state of affairs existed. Yet it is evident that where a pregnancy has terminated within so brief a period before death it is hardly possible that it should not have been in some degree a contributory cause. In these cases, therefore, while the cause of death as given on the certificate has been retained and used, the record has been completed by including parturition as a contributory factor. Of these 26 deaths 14 are officially ascribed to tuberculosis, 3 to typhoid fever, 4 to pneumonia, and 5 to miscellaneous non-infectious causes. One of these last was a case of criminal abortion, in which the cause of death was officially given as "heart stopped."

To sum up the situation, in Fall River during the period covered, 1908 to 1912, there were 163 female decedents who had a terminated pregnancy within thirty days of their deaths. In 120 cases the deaths were clearly attributable to parturition; in 43 cases, although some other cause was accepted as the principal factor, parturition was plainly a very important contributory cause. In 60 cases, or 37 per cent. of the whole number, the death certificates gave no intimation that pregnancy or parturition had had any connection with the death, yet in 34 of these 60 death was clearly due to parturition. It is apparent what a difference in the knowledge of the hazard incident to parturition is made by the detection and correction of these 60 cases of erroneous or incomplete certification.

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[1] Deaths from parturition include here every fatal case in which a pregnancy at any stage (including full term) had terminated not more than thirty days before death occurred.

Error in Official Record of Decedent's Occupation. — In addition to the errors concerning the cause of death, whether principal or contributory, the records were found to be seriously inaccurate in their statements concerning the decedent's occupation. Fortunately, it was possible to correct this error to a very considerable degree; far more so than it was in the case of errors as to cause of death. For it was felt that in this study it was necessary to accept the physician's official statement as to the cause of death, except as to deaths from childbirth and pregnancy, in which only questions of fact were involved, unless he himself acknowledged that the original certification was wrong, and this policy was followed no matter how seriously the correctness of the certificate was doubted. But a similar adherence to the record was not considered necessary in regard to the statement of the decedent's occupation, this being a matter on which the physician's professional training would have no bearing, and of which neither he nor the hurried and sometimes careless undertaker probably had personal knowledge. When, therefore, an informant's statement as to the occupation of a given decedent differed from that of the death certificate, the former was taken as authoritative.

The errors of the death certificates as to occupation were both of omission and commission. Persons who were really cotton-mill operatives were not so recorded, and others were put down as operatives who had never worked in a cotton mill or who had not done so for more than two years preceding death.[1] The former error was the more common among female and the latter among male decedents.

The extent of these errors as accurately determined in Fall River for the whole eight-year period, 1905 to 1912, shows most conclusively the seriousness of the misapprehension which would be caused by using the official certificates without investigation of their accuracy.

For the eight-year period nearly one-half (49 per cent.) of the female decedents who were found to have been cotton-mill operatives were not so recorded. On the other hand, one-eighth (13 per cent.) of the group recorded as operatives were found on investigation not to have been cotton-mill operatives. Among the males for the same period, 23 per cent. of those who were finally classed as cotton operatives were recorded on the death certificate as following some other occupation, while one-fourth of those recorded as operatives could not properly be included among cotton-mill workers.

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[1] A considerable part of this error is due to the vague use of the term "operative," which is frequently employed on death certificates with nothing to show whether the person concerned worked in cotton or woolen mills, in dye works, bleacheries or printeries, or in piano or hat factories.

The recorded number of male operative decedents in Fall River for the eight-year period was 915. Of these, 233 were found not to have been cotton operatives, while 207 who on their death certificates were assigned to other occupations had really been cotton operatives. The real number of male operative decedents, therefore, was 889, the group as recorded having been larger by 26 than the facts justified.

On the other hand, the recorded number of female operative decedents in Fall River for the eight-year period was 548. Of these, 71 were found not to have been cotton operatives, while 459 who were recorded either as having other occupations or no occupation at all proved on investigation to have been really cotton operatives.

CONCLUSIONS.

There appears no reason now to suppose that the official registration of deaths is more inaccurate or incomplete in Fall River than elsewhere; indeed, in view of the advanced position which Massachusetts has taken in regard to vital statistics, there would seem to be some grounds for the opposite supposition. It is believed, therefore, that the facts disclosed in this summary indicate —

1. That there is urgent need for a closer supervision of death registration,[1] and for a sustained effort to secure greater accuracy and a nearer approach to completeness in the certificates filed.

2. That a small minority of the physicians of a city or State are able, nevertheless, most seriously to retard progress in industrial hygiene and preventive medicine through their failure, admittedly sometimes intentional, to give intelligent compliance with the death-registration requirements of the law.

3. That under present conditions death certificates need careful verification before any but the most general conclusions respecting early death in industry may be safely drawn from them. In particular, deductions as to the prevalence, the increase or the decrease within any specified age group of fatalities from causes like tuberculosis and parturition, or as to the effect of a given occupation upon those of a designated age who follow it, are liable to be wide of the truth if based upon the death data of the registrar's office, unless such data are first subjected to the detailed investigation described above.

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[1] This measurement of the registration errors within a single city through supplying a specific case in point suggestive of the possible size of the death registration problem confronting the country may, it is hoped, serve to reinforce and perhaps incite onward the various agencies already actively interested in the betterment of vital statistics; for example, the registrars of deaths, municipal, State and Federal; the national health, statistical and medical committees upon this subject and the insurance companies, one of which is rendering now especially notable service in this field of instilling into physicians a proper appreciation of the necessity of correct certification of deaths.

ACCURATE STATEMENTS OF OCCUPATIONS OF DECEDENTS.

The following paragraphs are extracts from a circular letter sent to all physicians in the United States by the Director of the Bureau of the Census, Washington, D. C. The request contained therein is of such importance that every physician is strongly urged to give heed to it, and to see that the statements upon death returns signed by him, as to occupation, are as specific and accurate as possible.

More accurate and definite statements of the occupations of decedents should be written upon death certificates. Until this is done mortality statistics by occupations will continue to be unsatisfactory.

The Bureau of the Census is planning for the near future a monograph on tuberculosis. How much more valuable this monograph will be if it is possible to show accurately the occupations of decedents.

As a physician you appreciate the importance of such statistics. As a physician you are by education better qualified than the ordinary informant to understand a proper statement of occupation.

Will you not, therefore, take pains to see that the occupation items upon each one of your death certificates are properly supplied?

AMERICAN PUBLIC HEALTH ASSOCIATION.

War Meeting for Health Officers, Change of Date.

A war meeting will be held at Washington, D. C., Oct. 17 to 20, 1917, by the American Public Health Association. This will replace the annual meeting which was to be held at New Orleans, La., Dec. 4 to 7, 1917.

The papers and conferences will deal largely with the health problems created by the great war, — the food supply, communicable diseases among soldiers, war and venereal disease, war and the health of the civil population, etc.

President Wilson has said: "It is not an army we must shape and train for war — it is a nation." Go to the Washington meeting, then come back and do your bit!

Washington will be crowded, and those interested are urged to reserve hotel accommodations at once. It will be easy to cancel reservations, but it may be impossible to obtain rooms at the last moment. Any hotel or railroad can give a list of Washington hotels.

Preliminary programs will be automatically mailed to all members of the A. P. H. A. about September 15. Non-members may receive them free by writing to: The American Public Health Association, 126 Massachusetts Avenue, Boston, Mass.

REPORT OF THE DIVISION OF FOOD AND DRUGS.

During the month of July, 1917, samples were collected in 52 cities and towns.

There were 699 samples of milk examined, of which 241 were below the legal standard, 30 samples were skimmed milk not properly labeled, and 76 samples contained added water.

There were 58 samples of food examined, of which the following were adulterated: 1 sample of canned peas which were soaked peas not properly labeled; 4 samples of decomposed eggs; 5 samples of ice cream containing less than 7 per cent. of milk fat; and 2 samples of compound lard not properly labeled.

There were 46 drugs examined, of which 14 were adulterated. These consisted of 6 samples of camphorated oil and 8 samples of spirit of nitrous ether somewhat deficient in the active ingredient.

There were 15 convictions for violation of the laws, $765 in fines being imposed. James Corman of Freetown, Harry W. Weeks of Framingham, Isaac Damon and Everett L. Houghton of Wayland, Harry Evans of Revere, John Griggs of Holliston, Benjamin Hebert of Acushnet, Nathan Kenney and Frank Zimera of Pittsfield, George Klonkinio of Hull, John A. Laurie of Lexington, Joseph Medeiros of Shawmut, John Rivera of Dartmouth, Adolph Venturi of Plymouth and Charles A. Wilson of Medway were convicted for violation of the milk laws. Messrs. Damon of Wayland, Evans of Revere and Laurie of Lexington appealed their cases. Simon Jegelewicz of Westfield was convicted for violation of the food laws.

There were 7 confiscations made, consisting of 100 pounds of decomposed beef tails, 50 pounds of decomposed calves' livers, 72 pounds of decomposed pork trimmings, 220 pounds of decomposed flounders, 210 pounds of decomposed salmon, 80 pounds of decomposed tomcod, and 96 pounds of uninspected and unstamped veal.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

Twelve samples of milk containing added water, produced by Isaac Damon of Wayland; 26 samples of milk containing added water, produced by John Adams of North Natick; 1 sample of milk containing added water, produced by Walter Klepacki of South Hadley Falls; 2 samples of skimmed milk not properly labeled, produced by Charles Helstein of Millis; 3 samples of skimmed milk not properly labeled produced by Adam Robson of Salem; 13 samples of milk containing added water, produced by John A. Laurie of Lexington; 2 samples of milk containing added water, produced by Everett A. Bowen of Middleborough; 1 sample of milk containing added water, produced by Isiah Linnell of Orleans; 1 sample of skimmed milk not properly labeled, produced by George O. Woodbury of Barnstable; 1 sample of skimmed milk not properly labeled, produced by Robert Bacon of Barnstable; 1 sample of skimmed milk not properly labeled, produced by F. K. Leatherbee of North Falmouth; 1 sample of skimmed milk not properly labeled, produced by Lincoln Crowell of Sandwich; 14 samples of milk containing added water, produced by John B. Silvia of Dartmouth; 3 samples of ice cream containing less than 7 per cent. of milk fat, manufactured by the International Milk Products Company, Schenectady, N. Y.; 1 sample of ice cream containing less than 7 per cent. of milk fat, manufactured by the Albany Ice Cream Company, Albany, N. Y.; and 1 sample of "Castle Haven" brand peas, which were soaked peas not properly labeled, put up by Phillips Packing Company, Cambridge, Md.

The licensed cold-storage warehouses report the following amounts of food placed in storage during the month of June, 1917: 5,720,858 dozens case eggs; 185,079 pounds of broken-out eggs; 8,729,509 pounds of butter; 729,764 pounds of poultry; 864 pounds of game; 6,021,816 pounds of fresh meat and fresh meat products; and 10,065,345 pounds of fresh food fish, making a total of 31,453,235 pounds.

There was on hand in storage on July 1, 1917, 18,422,139 dozens case eggs, 517,364 pounds of broken-out eggs, and 9,033,061 pounds of butter, making a total of 27,972,564 pounds.

QUARTERLY REPORT ON SLAUGHTERING.

A compilation of the quarterly reports on slaughtering for the quarter ending July 1 shows that during that period 41,053 animals were inspected by the local inspectors of slaughtering throughout the State. Of this number, 5,925 were cattle, 27,525 were calves, 7,403 were hogs, 199 were sheep and 1 was a goat. In addition to a number of parts, which were condemned where it was not necessary to condemn the entire carcass, 857 animals were condemned. Of this number, 142 were cattle, 655 were calves and 60 were hogs. There were 626 calves condemned on account of immaturity; 146 animals on account of tuberculosis, of which 119 were cattle, 3 were calves and 24 were hogs; 25 hogs on account of hog cholera; 12 animals were either bruised or injured, of which 1 was a cow and 11 were calves. The remaining 48 animals were condemned on account of actinomycosis, pneumonia, gastritis, indigestion, peritonitis, dysentery, abscesses, tumors, septicæmia, paralysis, traumatic pericarditis, parturient apoplexy, emaciation, anæmia, weak condition, sexual odor, poisoning, improperly bled, inspector not present, and died otherwise than by slaughter. Of this number, 22 were cattle, 15 were calves and 11 were hogs.

These figures as compared with the figures for the same period in 1916 show an increase in cattle of about 300, and in calves of about 3,000; a decrease in hogs of about 2,700, and in sheep of about 1,100; while the total number of animals inspected shows a decrease of about 300. The number of cattle condemned has increased 18, and the number of calves has increased 92. The number of hogs condemned is exactly the same.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF JULY, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of July, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, . . .	399	56	166	49	128

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis, ...	351	89	262	
*Typhoid fever (Widal test), . .	212	28	178	6
Typhoid fever (culture test), . .	46	4	42	
Malaria, ...	15	1	14	
Gonorrhœa, ...	137	10	127	
Miscellaneous, ...	27			

Total number of examinations made, 1,187.

SMALLPOX IN MASSACHUSETTS DURING CURRENT YEAR.

There have been 52 cases of smallpox in the State during the first seven months of the year. Of these, 4 cases were isolated cases and the remaining 48 cases were connected with one outbreak.

The isolated cases were reported from Lee, Boston, Bernardston and Blackstone. The Lee case in January was apparently connected with the November, 1916, epidemic in that town, when 18 cases were reported. Of the 2 cases in February, one in Bernardston was a person just arrived ill from Iowa, and the other case in Boston was an individual from Connecticut who was infected in that State. The Blackstone case was reported in June, and the source of infection was not found. The Boston and Bernardston cases had never been vaccinated, while the Lee and Blackstone cases were vaccinated in 1905.

The outbreak of 48 cases was centered in Worcester and started in January, when a Finnish immigrant arrived in the city from New York on January 4, apparently bringing the infection from a ship from Sweden on which smallpox was present. The first case was a fellow countryman, who lived in the boarding house to which the immigrant came.

Of these 48 cases 9 died, — a fatality rate of 18.7 per cent., much higher than the usual type of disease prevailing in New England, at once suggesting on its appearance a new strain of the disease.

Of the 9 who died 5 had never been vaccinated, 3 were vaccinated in childhood from twenty to sixty years previously, and no history was obtained for one case.

Of the 39 cases that recovered, 17 were never vaccinated; 19 were vaccinated more than seven years previously; and 3 were vaccinated within seven years.

In March 5 cases were reported and in April 5 cases. On April 26 a molder in the eruptive stage of the disease attended a meeting of the local union, and 12 men attending the meeting later had smallpox.

Molders from Fitchburg, Shrewsbury and Webster attended the meeting, and 4 cases in Fitchburg and 3 each in Shrewsbury and Webster followed, making a total of 48 cases for the outbreak.

On the appearance of the outbreak the Worcester board of health took rigid measures, isolating all cases in the city and in Shrewsbury, followed up by a house-to-house canvass of suspected cases and vaccination of all persons who might have come in contact with cases or infected material.

The last case appeared July 24, and the outbreak is apparently ended.

There were also 3 cases connected with the Worcester outbreak reported from Albany County, New York, by the New York State Department of Health, one of which was fatal. Of the 3 cases none had been vaccinated.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR JULY, 1917.

General Prevalence.

The month of July was marked by a lack of epidemics of communicable diseases. There were 4,601 cases of communicable disease reported, — a considerable decrease as compared with 10,214 cases in the preceding month and 5,464 in July, 1916.

The most noticeable drop in comparison with June was in measles, which decreased from 3,785 cases to 1,347. The only significant increase was in pulmonary tuberculosis. This increase has now been steady since February, when 658 cases were reported.

Poliomyelitis. — There were 38 cases of poliomyelitis reported during the month. These were distributed in the district east of the Connecticut River and north of Brockton. The cases as a whole were distributed evenly in this section, except 10 cases which occurred in Haverhill and 5 in Lynn. No cases were reported in the Berkshire or Cape Cod districts.

Smallpox. — One case of smallpox was reported from Worcester.

Typhoid Fever. — As compared with July, 1916, the State shows a decrease, — 109 cases this year as against 128 cases for July last year. The total of the cases this year is slightly below the seasonal average. Of the 109 cases reported, 51 have been carefully investigated and show that 9 are due to contact with other cases, 5 are apparently due to eating raw shellfish, 2 from drinking polluted water, and in 35 cases sources of infection could not be determined.

Diseases on the Premises of Milk Handlers. — One case of typhoid fever occurred in a family of a milk handler, and 5 milk farms were reported as having communicable diseases on their premises. Of the 5 farms 3 had scarlet fever present in members of the family, and the other 2 farms had cases of septic sore throat. Suitable arrangements were made in 4 of the cases on the farms so that the selling of milk was allowed to continue. On one farm where scarlet fever was present, owing to the fact that the parents would not permit the child to go to a hospital the milk supply was stopped for a few weeks until the local board of health regulations were followed.

EPIDEMICS AND OUTBREAKS.

Septic Sore Throat. — An epidemic of over 100 cases of septic sore throat due to a hemolytic streptococcus began during the last few days of the month in Wellesley, Natick and Dover. Investigations are under way to determine the cause.

Scarlet Fever. — An outbreak of 4 cases of scarlet fever occurred in the Medfield State Hospital as the result of a light unrecognized case of the disease. The cases were at once isolated, and the outbreak ceased.

Measles. — An epidemic of 53 cases of measles occurred at Westminster. Investigation showed that no physicians were called by many of the parents until the disease was well developed in their children; and thus no attempt was made to isolate the cases until it was widely spread throughout the community.

DISTRIBUTION.

All Communicable Diseases.

	June, 1917.	July, 1917.	July, 1916.
Total cases, ...	10,214[1]	4,601	5,465
Case rate per 100,000 population, . .	265.4[1]	119.5	144.8

Certain Prevalent Diseases.

	June, 1917.	July, 1917.	July, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[2]
Diphtheria: —				
Total cases, ...	793	597	418	Lowell, . . . (10) 58 Gardner, . . . (1) 8
Case rate per 100,000 population, .	20.6	15.5	11.1	
Measles: —				Fairhaven, . . (0) 18 New Bedford, . . (13) 60 Scituate, . . . (3) 12 Everett, . . . (5) 29 Arlington, . . (2) 53 Waltham, . . (6) 55 West Boylston, . (1) 45 Westminster, . . (0) 53 Hatfield, . . . (0) 15 Hinsdale, . . (0) 13 North Adams, . (1) 40 Pittsfield, . . (1) 34
Total cases, ...	3,785	1,347	2,670	
Case rate per 100,000 population, .	98.3	35.0	70.8	
Scarlet fever: —				
Total cases, ...	412	241	218	
Case rate per 100,000 population, .	10.7	6.3	5.8	
Typhoid fever: —				
Total cases, ...	105	109	128	
Case rate per 100,000 population, .	2.8	2.8	3.4	
Whooping cough: —				
Total cases, ...	328	344	499	
Case rate per 100,000 population, .	8.5	8.9	13.2	
Tuberculosis, pulmonary: —				
Total cases, ...	745[1]	843	730	
Case rate per 100,000 population, .	19.4	21.9	19.3	
Tuberculosis, other forms: —				
Total cases, ...	66	64	73	
Case rate per 100,000 population, .	1.7	1.7	1.9	

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[1] Certain cases have been revoked since the June Bulletin was issued.

[2] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

Rare Diseases.

Anterior poliomyelitis was reported from Beverly, 2; Brockton, 1; Groton, 1; Groveland, 3; Hadley, 1; Haverhill, 10; Lawrence, 2; Lowell, 3; Lynn, 5; Malden, 1; Medford, 1; Quincy, 1; Salem, 1; Saugus, 2; Springfield, 2; Weymouth, 1; Worcester, 1.

Cerebrospinal meningitis was reported from Attleboro, 1; Boston, 4; Everett, 1; Brockton, 1; Haverhill, 2; Malden, 1; New Bedford, 2; Northampton, 1; Pittsfield, 3.

Dog bite was reported from Attleboro, 2; Dartmouth, 2; Fall River, 1; Medford, 1; Northampton, 1; Sunderland, 1; Worcester, 1.

Dysentery was reported from Boston, 7; Holyoke, 1.

Malaria was reported from Boston, 6; Chicopee, 2; Dedham, 2; Natick, 1.

Pellagra was reported from Natick, 1; Milford, 1.

Septic sore throat was reported from Arlington, 2; Barnstable, 2; Boston, 1; Brookline, 1; Cambridge, 1; Dedham, 2; Medford, 1; Natick, 12; Newton, 1; Somerville, 1; Springfield, 1; Swampscott, 1.

Smallpox was reported from Worcester, 1.

Tetanus was reported from Boston, 1; Gardner, 1.

Trachoma was reported from Boston, 1; Chelsea, 2; Lynn, 1; Worcester, 1.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	Occupation.	Locality.	Sex.	Age.	Color.
Aniline oil,	Auto tire maker,	Chicopee,	M	56	W
Aniline oil,	Rubber mixer,	Chicopee,	M	28	W
Glanders,	Stableman,	Attleboro,	M	39	W
Lead,	-	-	M	26	-
Lead,	Plumber,	Charlestown,	M	43	W
Lead,	Steam fitter,	Charlestown,	M	31	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts, ...	3,849,006	15	4	799	2	793	69	1757	2	277	173	3785	59
2	CITIES OVER 200,000.													
3	Boston, ...	778,500	2	–	194	1	305	33	355	–	72	46	960	20
4	CITIES, 150,000-200,000.													
5	Worcester, ...	170,077	3	1	27	–	25	–	25	–	17	7	55	1
6	CITIES, 100,000-150,000.	*570,968*	*3*	*2*	*101*	–	*159*	*13*	*479*	*2*	*46*	*32*	*700*	*22*
7	Fall River, ...	127,218	–	–	13	–	14	2	38	1	13	6	187	8
8	New Bedford, ...	115,272	–	–	13	–	13	–	10	–	9	6	188	6
9	Cambridge, ...	110,582	2	1	32	–	38	2	140	–	9	8	216	6
10	Springfield, ...	109,174	1	1	38	–	35	8	289	1	8	9	93	1
11	Lowell, ...	108,722	–	–	5	–	59	1	2	–	7	3	16	1
12	CITIES, 50,000-100,000.	*511,498*	*5*	–	*92*	–	*89*	*9*	*137*	–	*31*	*24*	*248*	–
13	Lynn, ...	98,659	–	–	12	–	6	–	44	–	5	6	33	–
14	Lawrence, ...	92,187	–	–	8	–	12	–	1	–	4	3	2	–
15	Somerville, ...	91,102	–	–	7	–	22	2	21	–	3	4	58	–
16	Brockton, ...	64,668	–	–	26	–	9	1	8	–	3	2	6	–
17	Holyoke, ...	62,179	–	–	5	–	4	–	8	–	2	5	41	–
18	Haverhill, ...	51,809	5	–	11	–	9	1	2	–	12	2	8	–
19	Malden, ...	50,897	–	–	23	–	27	5	53	–	2	2	100	–
20	CITIES AND TOWNS, 25,000-50,000.	*498,330*	–	–	*99*	–	*84*	*6*	*156*	–	*34*	*17*	*610*	*7*
21	Chelsea, ...	48,273	–	–	14	–	10	–	12	–	8	2	32	1
22	Newton, ...	44,573	–	–	16	–	3	–	31	–	1	1	64	–
23	Quincy, ...	44,221	–	–	6	–	5	–	5	–	1	1	12	–
24	Pittsfield, ...	42,913	–	–	1	–	2	–	37	–	3	1	190	6
25	Fitchburg, ...	40,464	–	–	5	–	14	1	1	–	7	2	78	–
26	Salem, ...	39,872	–	–	5	–	6	–	5	–	3	1	8	–
27	Everett, ...	39,588	–	–	10	–	12	1	18	–	4	5	42	–
28	Taunton, ...	37,001	–	–	6	–	1	–	1	–	–	2	2	–
29	Brookline, ...	36,007	–	–	25	–	6	–	11	–	1	–	40	–
30	Medford, ...	33,758	–	–	4	–	5	–	23	–	2	–	25	–
31	Chicopee, ...	32,230	–	–	3	–	7	1	3	–	2	–	4	–
32	Waltham, ...	31,179	–	–	4	–	5	1	9	–	–	–	113	–
33	Revere, ...	28,251	–	–	–	–	8	2	–	–	2	2	–	–
34	CITIES AND TOWNS, 10,000-25,000.	*569,407*	–	–	*140*	*1*	*79*	*5*	*295*	–	*41*	*20*	*601*	*3*
35	Beverly, ...	24,863	–	–	1	–	–	–	8	–	–	–	6	–
36	Gloucester, ...	24,513	–	–	–	–	–	–	3	–	1	–	4	1
37	Northampton, ...	22,636	–	–	2	–	2	–	9	–	1	1	34	–
38	North Adams, ...	22,042	–	–	7	–	–	–	1	–	2	1	188	1
39	Peabody, ...	19,908	–	–	1	–	–	–	2	–	–	1	4	–
40	Attleboro, ...	19,480	–	–	5	–	2	–	6	–	2	–	4	–
41	Westfield, ...	19,456	–	–	1	–	5	1	32	–	1	–	10	–
42	Watertown, ...	18,123	–	–	11	–	10	–	13	–	–	–	49	–
43	Leominster, ...	17,675	–	–	4	–	3	–	6	–	4	3	3	–
44	Melrose, ...	17,394	–	–	11	–	11	–	19	–	5	1	39	–
45	Framingham, ...	17,146	–	–	37	–	–	–	40	–	–	–	10	–
46	Gardner, ...	17,116	–	–	2	–	11	1	3	–	1	–	5	–
47	Woburn, ...	16,896	–	–	–	–	–	–	2	–	–	1	5	–
48	Arlington, ...	16,524	–	–	–	–	–	–	2	–	–	–	7	–
49	Marlborough, ...	15,546	–	–	10	–	2	–	15	–	1	1	4	–
50	Newburyport, ...	15,470	–	–	5	–	–	–	16	–	1	–	37	–
51	Methuen, ...	15,137	–	–	1	–	–	–	–	–	1	–	2	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and correc

TO THE PUBLIC HEALTH,[1] JUNE, 1917.

19C		38A		7		28-29		30-35		1		8		61A		4		100		5		
Mumps.		Ophthalmia Neonatorum.		Scarlet Fever.		Tuberculosis, Pulmonary.		Tuberculosis, Other Forms.		Typhoid Fever.		Whooping Cough.		Cerebrospinal Meningitis.		Malaria.		Septic Sore Throat.		Smallpox.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
828	1	184	–	412	10	743	366	66	55	104	10	328	22	36	14	16	1	12	4	10	3	1
																						2
181	1	89	–	95	7	254	105	17	21	11	1	46	–	6	7	5	–	6	1	–	–	3
																						4
17	–	6	–	30	1	34	14	2	2	–	–	14	1	2	2	–	–	–	–	4	2	5
85	–	*33*	–	*52*	*1*	*137*	*56*	*10*	*8*	*37*	*4*	*28*	*9*	*8*	*2*	*1*	–	–	–	–	–	6
6	–	11	–	3	–	49	11	3	–	24	2	15	2	–	–	1	–	–	–	–	–	7
12	–	7	–	1	–	24	14	2	2	–	–	5	6	–	–	–	–	–	–	–	–	8
24	–	7	–	8	1	27	12	3	–	6	1	2	–	–	–	–	–	–	–	–	–	9
37	–	3	–	34	–	22	8	2	2	3	1	5	1	7	2	–	–	–	–	–	–	10
6	–	5	–	6	–	15	11	–	4	4	–	1	–	1	–	–	–	–	–	–	–	11
141	–	*25*	–	*64*	*1*	*89*	*36*	*14*	*6*	*10*	–	*55*	*2*	*1*	–	*1*	–	–	–	–	–	12
8	–	6	–	16	1	18	7	3	1	3	–	27	–	–	–	–	–	–	–	–	–	13
5	–	–	–	2	–	17	8	2	4	2	–	7	2	1	–	–	–	–	–	–	–	14
8	–	–	–	12	–	18	8	4	–	1	–	3	–	–	–	–	–	–	–	–	–	15
86	–	9	–	13	–	12	4	–	–	1	–	6	–	–	–	1	–	–	–	–	–	16
1	–	5	–	10	–	6	3	–	–	1	–	–	–	–	–	–	–	–	–	–	–	17
–	–	3	–	7	–	15	6	5	–	1	–	8	–	–	–	–	–	–	–	–	–	18
33	–	2	–	4	–	3	–	–	1	1	–	4	–	–	–	–	–	–	–	–	–	19
119	–	*11*	–	*38*	–	*68*	*44*	*11*	*5*	*15*	*1*	*84*	*4*	*9*	*1*	*1*	–	*4*	–	*2*	*1*	20
2	–	6	–	3	–	13	2	–	–	2	–	3	–	2	–	–	–	1	–	–	–	21
31	–	–	–	1	–	5	3	–	–	–	–	9	–	–	–	–	–	1	–	–	–	22
8	–	–	–	5	–	4	3	–	–	1	–	4	–	–	–	–	–	–	–	–	–	23
3	–	1	–	4	–	7	9	–	1	1	–	5	2	6	1	–	–	–	–	–	–	24
16	–	–	–	5	–	4	8	2	1	–	–	2	–	–	–	–	–	–	–	2	1	25
6	–	–	–	2	–	8	4	5	2	1	–	52	2	–	–	–	–	–	–	–	–	26
8	–	1	–	1	–	5	1	1	–	3	–	–	–	–	–	–	–	–	–	–	–	27
–	–	1	–	5	–	1	5	–	–	2	1	–	–	–	–	–	–	–	–	–	–	28
27	–	–	–	1	–	3	1	1	–	1	–	2	–	–	–	1	–	1	–	–	–	29
4	–	1	–	3	–	2	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	30
–	–	1	–	1	–	12	4	1	–	–	–	6	–	1	–	–	–	–	–	–	–	31
14	–	–	–	1	–	3	2	1	1	1	–	1	–	–	–	–	–	–	–	–	–	32
–	–	–	–	6	–	1	–	–	–	3	–	–	–	–	–	–	–	–	–	–	–	33
103	–	*12*	–	*59*	–	*69*	*41*	*7*	*4*	*13*	*2*	*56*	*2*	*6*	*2*	*3*	–	–	*1*	*1*	–	34
3	–	–	–	2	–	5	1	–	–	2	–	9	–	4	–	–	–	–	–	–	–	35
–	–	–	–	1	–	1	–	2	–	1	–	–	–	1	–	–	–	–	–	–	–	36
5	–	–	–	5	–	5	7	–	1	–	–	–	–	–	–	–	–	–	–	–	–	37
–	–	1	–	1	–	–	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	38
1	–	1	–	1	–	4	2	–	–	1	–	7	–	–	–	–	–	–	–	–	–	39
1	–	1	–	–	–	3	1	–	–	1	–	5	1	–	–	–	–	–	–	–	–	40
3	–	–	–	4	–	8	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41
3	–	1	–	1	–	2	3	–	–	1	1	2	–	1	–	–	–	–	–	–	–	42
1	–	–	–	1	–	4	2	1	–	–	–	6	–	–	–	–	–	–	–	–	–	43
–	–	1	–	1	–	1	2	1	–	–	–	1	–	–	–	–	–	–	–	–	–	44
17	–	–	–	9	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	45
2	–	–	–	2	–	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	46
–	–	1	–	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	47
1	–	–	–	–	–	1	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	48
–	–	–	–	1	–	2	–	–	1	–	–	3	1	–	–	–	–	–	–	–	–	49
–	–	1	–	1	–	–	1	–	–	–	–	–	–	–	1	–	–	–	–	–	–	50
–	–	–	–	3	–	1	–	1	–	–	–	2	–	–	1	–	–	–	1	–	–	51

---

tion, the deaths given above, while approximately correct, are not absolutely complete.

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,930	–	–	1	–	–	–	–	–	–	1	1	–
53	Weymouth,	14,444	–	–	–	–	–	–	–	–	–	–	–	–
54	Milford,	13,962	–	–	16	–	1	–	1	–	–	–	2	–
55	Winthrop,	13,918	–	–	2	–	–	–	12	–	1	–	2	–
56	Greenfield,	13,590	–	–	10	–	–	–	27	–	1	1	8	–
57	Wakefield,	13,389	–	–	2	–	2	–	2	–	2	–	42	–
58	Adams,	13,302	–	–	1	–	3	–	1	–	1	1	12	–
59	Plymouth,	13,273	–	–	–	–	1	1	6	–	2	–	1	–
60	Clinton,	13,243	–	–	–	–	–	–	–	–	4	1	25	1
61	Webster,	13,031	–	–	4	–	5	–	–	–	–	–	–	–
62	Norwood,	12,286	–	–	2	–	1	–	14	–	1	–	3	–
63	West Springfield,	12,273	–	–	–	–	–	1	–	–	–	–	–	–
64	Danvers,	11,955	–	–	1	1	1	–	4	–	2	4	–	–
65	Dedham,	11,820	–	–	–	–	5	–	6	–	2	–	2	–
66	Natick,	11,673	–	–	1	–	–	–	–	–	2	1	1	–
67	Saugus,	11,189	–	–	–	–	5	–	–	–	–	–	–	–
68	Easthampton,	10,430	–	–	–	–	2	–	–	–	–	1	3	–
69	Athol,	10,333	–	–	–	–	2	1	–	–	1	–	80	–
70	Winchester,	10,312	–	–	1	–	1	–	29	–	1	–	5	–
71	Bridgewater,	10,129	–	–	1	–	4	–	16	–	1	1	3	–
72	TOWNS, 5,000–10,000.	*355,823*	*1*	–	*86*	–	*36*	*2*	*184*	–	*17*	*13*	*194*	*2*
73	TOWNS, 2,500–5,000.	*181,232*	*1*	*1*	*35*	–	*8*	–	*47*	–	*9*	*4*	*169*	*2*
74	TOWNS UNDER 2,500.	*213,171*	–	–	*25*	–	*7*	–	*79*	–	*8*	*8*	*246*	*2*
75	STATE INFIRMARY,		–	–	–	–	1	1	–	–	2	2	2	–

In addition to the above there occurred 1 case of actinomycosis in Cambridge; 9 cases of anthrax, 5 in Chelsea, and 1 in Waltham; 9 cases of dog bite, 3 in Attleboro, 1 in Brockton, 1 in Lawrence, 1 in Lowell, and 1 in Worcester, with 3 deaths, 1 in Boston, 1 in Springfield and 1 in Worcester; 7 cases of pellagra, 1 in Danvers; 4 cases of tetanus, 1 in Boston, 1 in Springfield, 1 in Winchester and 1 in Worcester, and 1 death

TO THE PUBLIC HEALTH — *Concluded.*

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28-29 Tuberculosis, Pulmonary.		30-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough		61A Cerebrospinal Meningitis.		4 Malaria.		100 Septic Sore Throat.		5 Small-pox.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
-	-	-	-	-	-	5	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	52
-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53
4	-	-	-	3	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
1	-	1	-	2	-	1	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-	55
16	-	1	-	7	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	56
-	-	-	-	2	-	2	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	57
-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58
-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59
1	-	-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60
-	-	1	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	61
1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63
1	-	-	-	-	-	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	64
2	-	-	-	2	-	1	2	1	-	-	-	8	-	-	-	3	-	-	-	-	-	65
4	-	1	-	2	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67
-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68
-	-	-	-	5	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	69
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70
11	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71
78	-	*3*	-	*40*	-	*28*	*24*	*2*	*7*	*11*	*1*	*30*	-	*2*	-	*1*	-	*2*	-	-	-	72
25	-	*4*	-	*9*	-	*16*	*8*	*3*	*2*	-	-	*6*	*2*	*2*	-	-	-	-	*1*	*3*	-	73
79	-	*1*	-	*24*	-	*13*	*19*	-	-	*7*	*1*	*9*	*2*	-	-	*4*	*1*	-	*1*	-	-	74
-	-	-	-	1	-	35	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75

Boston, 1 in Malden, 1 in Peabody, 1 in Salem and 1 in Winchester, with 3 deaths, 1 in Boston, 1 in
1 in North Adams, 1 in Salisbury, and 1 in Worcester; 7 cases of dysentery, 4 in Boston, 2 in Wrentham
Chelsea, 1 in Danvers, 1 in Lynn, 1 in Somerville, 2 in Taunton and 1 in Worcester, with 1 death in
in Boston; and 7 cases of trachoma, 2 in Boston, 2 in Chelsea, 2 in Lawrence and 1 in Salem.

APPOINTMENT OF TEMPORARY ACTING DISTRICT HEALTH OFFICER.

Dr. George T. O'Donnell of Waltham has recently been designated as temporary Acting State District Health Officer to carry on the work of Dr. William W. Walcott in the South Midland District during Dr. Walcott's leave of absence while engaged in military duty.

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

Commissioner, ALLAN J. McLAUGHLIN, M.D.

Division of Administration, . . .	Acting Director, LYMAN A. JONES, M.D.
Division of Sanitary Engineering, . .	Director and Chief Engineer, X. H. GOODNOUGH, C.E.
Division of Communicable Diseases, . .	Director, EUGENE R. KELLEY, M.D.
Division of Water and Sewage Laboratories,	Director and Chemist, H. W. CLARK.
Division of Biologic Laboratories, . .	Director and Pathologist, MILTON J. ROSENAU, M.D.
Division of Food and Drugs, . . .	Director and Analyst, HERMANN C. LYTHGOE.
Division of Hygiene, ...	Director, LYMAN A. JONES, M.D.

Public Health Council.

ALLAN J. McLAUGHLIN, M.D., *Chairman.*

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DAVID L. EDSALL, M.D.
JOSEPH E. LAMOUREUX, M.D.
WM. J. GALLIVAN, M.D.
JOHN T. WHEELWRIGHT.

State District Health Officers.

The Southeastern District, . . .	ADAM S. MACKNIGHT, M.D., Fall River.
The Eastern District, ...	MERRILL E. CHAMPION, M.D., Wollaston.
The Northeastern District, . . .	ARTHUR A. BROWN, M.D., Swampscott.
The North Midland District, . . .	CHARLES E. SIMPSON, M.D., Lowell.
The South Midland District, . .	WILLIAM W. WALCOTT, M.D., Natick [1] GEORGE T. O'DONNELL, M.D., Waltham.[2]
The Wachusett District, ...	FRANCIS A. FINNEGAN, M.D., Fitchburg.
The Connecticut Valley District, . .	JOHN S. HITCHCOCK, M.D., Northampton.
The Berkshire District, ...	HOWARD A STREETER, M D . Pittsfield.

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[1] Leave of absence, military service.

[2] Temporary Health Officer.

PUBLIC HEALTH BULLETIN

ISSUED MONTHLY
BY THE
STATE DEPARTMENT OF HEALTH
OF MASSACHUSETTS

SEPTEMBER, 1917

Vol. 4, No. 9

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass., under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

CHILD CONSERVATION.

IN a time of national stress, such as accompanies the present war, with the loss of man power, the importance of baby saving is tremendously accentuated. It has been demonstrated abroad that by intensive methods of child conservation enough lives of babies can be saved, over and above those saved by ordinary methods in time of peace, to go far toward replacing in a few years the man power lost because of the war.

Massachusetts has been in the forefront in baby saving, and now has an opportunity of greatly increasing child conservation by assisting those agencies and organizations already engaged in child hygiene and by stimulating the establishment of such in communities where little work of this nature is being done. The Division of Hygiene of this Department has been working along these lines, but in view of the present extraordinary conditions, and because the importance of the conservation of child life at this time particularly can hardly be overestimated, the Commissioner of Health has appointed a committee on child conservation to work in close co-operation with the Division of Hygiene, to promote further this special work. The committee is as follows: —

Dr. David L. Edsall, member of the Public Health Council of the State Department of Health, Chairman.

Dr. Wm. J. Gallivan, member of the Public Health Council of the State Department of Health.

Dr. Lyman A. Jones, Director, Division of Hygiene of the State Department of Health, Recorder.

Advisory Members.

Dr. Fritz Talbot, Pediatrist, Chief of Children's Medical Department, Massachusetts General Hospital.

Dr. Richard M. Smith, Pediatrist, Assistant in Pediatrics, Harvard Medical School.

Dr. Walter Fernald, Psychiatrist, Superintendent of the Massachusetts School for the Feeble-minded.

Dr. William Healy, Psychologist, Director of the Psychopathic Institute of the Juvenile Court, Chicago.

Miss Mary Beard, Director, Instructive District Nursing Association.

Mrs. Wm. Lothrop, Member, Committee on Civilian Relief, Red Cross.

Dr. Robert L. De Normandie, Pediatrist, Obstetrician.

The specific object of the work of the committee is to demonstrate to cities and towns the necessity for child conservation work, and to point out the agencies needed for baby saving for that particular town. It will also be a part of its work to stimulate the communities throughout the State to provide funds for the employment of trained workers to carry on this work in each community. The work will be done by child welfare supervisors, — especially trained and experienced nurses, — one for each of the eight health districts in the State. These supervisors will work in co-operation with the State District Health Officer in each district, making surveys of individual communities and discovering what the actual health conditions are. When the special problem of a city or town has been determined, definite effort follows to prevail upon that city or town to provide funds to meet its individual needs.

Funds for the payment of the salaries of these supervisors have been secured from the Red Cross, thus saving the State funds as far as possible, and enlisting a widespread outside interest. The sum of $5,000 has been granted by the Governor and Council for the purpose of defraying the expenses of the field workers.

Information has already been obtained and plotted on maps showing present hospital facilities, baby clinics and various relief organizations, and the location of health and social workers for the entire State. The records of the State Department of Health showing the births and deaths and the infant mortality rate for every city and town in the State are also available for the use of this committee.

Acting at the request of the committee on child conservation, a survey of the city of Boston has been made by the Baby Hygiene Association to find out the character and extent of the preventive and curative work done for infants and children, and to determine the lines along which it is most necessary to extend this work. The conclusions reached in this survey were based upon the following questionnaire sent to station nurses of the Baby Hygiene Association, supervisors of the Instructive District Nursing Association and head workers of settlement houses. The report and tabulation were prepared by Lenah Austin Smith, R.N., one of the child welfare supervisors.

PRENATAL CARE.

1. What organizations in your district give prenatal nursing care?
2. Is there a clinic for expectant mothers where they can be examined by physicians before confinement?
3. Do the mothers in your district receive adequate obstetrical care?
4. Do you feel that there is further need of prenatal or proper obstetrical care for the mothers in your district? If so, which, in your opinion, is the most needed, and what is the best way to meet this need?

POSTNATAL CARE.

First Year of Life.

1. Names of clinics for well babies in your district.
2. Names of medical clinics for babies.
3. What, in your opinion, is the most urgent need of the babies in your district?
4. What remedy would you suggest?

One to Five Years.

1. Is there any organized supervision of well children between milk station age and school age in your district?
2. Are there any organized classes of mothers at settlement houses or elsewhere which could be given instruction in child hygiene?
3. What, in your opinion, is most needed in your district, — prenatal care, obstetrical care, postnatal care during the first year of life, or supervision between the ages of one and five years?

Nurses were instructed to consult with workers of the Associated Charities and other social workers in their district before handing in their report. In this way the survey offers not the opinion of a few individuals, but the composite opinion of workers in each district.

INFANT AND CHILD WELFARE AGENCIES IN BOSTON.

[I. D. N. A. — Instructive District Nursing Association. B. H. A. — Baby Hygiene Association.]

District.	Wards.	Number of Deaths under One Year.	Birth Rate established per 1,000 Inhabitants.	Death Rate under One Year per 1,000 Births.	Prenatal and Obstetrical.				
					Prenatal Nursing Station.	Pregnancy Clinics.	Do Mothers receive Adequate Care?	Need.	Other Agencies used.
East Boston, . .	1 2	55 159	22.05 45.15	103.00 82.38	I. D. N. A., . .	Maverick Dispensary.	Not all, . . .	A free or low-fee clinic and nursing service during delivery.	Jewish Women's Hospital. Boston Lying-in Hospital.
Charlestown, . .	3 4	57 65	20.01 19.31	132.87 177.60	I. D. N. A., . .	None, . . .	Not all, . . .	Prenatal clinic which would insure adequate obstetrical care.	- -
North and West Ends.	5	243	29.32	104.74	I. D. N. A., . . Hull Street Dispensary.	Boston Lying-in Hospital. Boston Lying-in Branch. Jewish Women's Hospital.	No, because many Italians and some Syrians prefer midwives.	Cheaper rates at hospitals for women with small income. Pregnancy clinic in Italian district or well-trained midwives.	Fayette Street Dispensary. City Hospital. Homœpathic Hospital. Hull Street Dispensary.
South End, . .	6	71	19.76	94.54	Homœopathic Hospital. Lincoln House Dispensary.	Lincoln House Dispensary. Berkeley Infirmary. City Hospital. Homœopathic Hospital.	Yes, with exception of nurse at confinement.	Health center which would allow for intensive work. More prenatal work. Nurse at confinement.	Boston Lying-in Hospital. Boston Lying-in Branch. Jewish Women's Hospital. I. D. N. A. Fayette Street Dispensary.
	7	44	11.09	110.83	None, . . .	None, . . .	Not all, . . .	Prenatal work. Nurse at confinement.	Lincoln House Dispensary. Berkeley Infirmary.

									Homœopathic Hospital. City Hospital. Boston Lying-in Hospital. Fayette Street Dispensary. I. D. N. A.
South and West Ends.	8	44	13.23	84.94	Fayette Street Dispensary.	Fayette Street Dispensary.	Not all, . . .	More prenatal work.	I. D. N. A. Boston Lying-in Hospital. Berkeley Infirmary. Homœopathic Hospital. Lincoln House Dispensary.
South Boston, . .	9 10 11	107 60 68	23.70 25.71 24.10	130.17 88.88 105.43	I. D. N. A., . .	None, . . .	Usually with the exception of nurse at confinement.	Prenatal and obstetrical clinics.	Boston Lying-in Hospital.
South End and Roxbury.	12	80	25.26	105.54	None, . . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic at Roxbury Neighborhood House.	Homœopathic Hospital. Boston Lying-in Hospital. Jewish Women's Hospital. City Hospital. I. D. N. A.
Roxbury Crossing, .	13	84	21.42	125.94	I. D. N. A., . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic at Norfolk House.	Boston Lying-in Hospital. Jewish Women's Hospital. Homœopathic Hospital.
Roxbury, . .	14 15	49 44	21.37 23.29	80.86 70.62	None, . . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic.	I. D. N. A. Boston Lying-in Hospital. Jewish Women's Hospital
Grove Hall, . .	16	29	19.72	56.75	None, . . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic.	Jewish Women's Hospital. Boston Lying-in Hospital I. D. N. A.

Infant and Child Welfare Agencies in Boston — *Continued.*

District.	Wards.	Number of Deaths under One Year.	Birth Rate established per 1,000 Inhabitants.	Death Rate under One Year per 1,000 Births.	Prenatal and Obstetrical.				
					Prenatal Nursing Station.	Pregnancy Clinics.	Do Mothers receive Adequate Care?	– Need.	Other Agencies used.
Upham's Corner, .	17	132	20.86	101.86	I. D. N. A., . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic.	– –
Fields Corner, . .	18	36	21.33	63.94	None, . . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic.	I, D. N. A.
Dorchester, . .	19 20 21	40 40 38	17.71 21.44 20.20	97.32 79.68 69.59	None, . . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic.	I. D. N. A.
Jamaica Plain, .	22 23	54 29	24.54 23.41	90.60 56.64	I. D. N. A., . .	None, . . .	Not all, . . .	Prenatal and obstetrical clinic.	– –
Hyde Park, . .	24	60	25.40	102.39	I. D. N. A., . .	None, . . .	?	Free prenatal care and pregnancy clinic for women whose weekly income (husband's) is less than a definite per capita amount.	– –
Brighton, . .	25 26	30 42	23.61 40.43	75.94 55.40	I. D. N. A., . .	St. Elizabeth's Hospital for house patients.	As far as known, .	A pregnancy clinic.	– –

INFANT AND CHILD WELFARE AGENCIES IN BOSTON — *Continued.*

DISTRICT.	Wards.	Number of Deaths under One Year.	Birth Rate established per 1,000 Inhabitants.	Death Rate under One Year per 1,000 Births.	POSTNATAL UP TO ONE YEAR.				
					Well Baby Clinics.	Sick Baby Clinics.	Need.	Remedy.	Other Agencies used.
East Boston, . .	1 2	55 159	22.05 45.15	103.00 82.38	B. H. A., . .	Maverick Dispensary.	House sanitation, parks and playgrounds. Screening of houses. Education of mothers.	Classes for mothers. Educational moving pictures.	Massachusetts General Hospital. I. D. N. A.
Charlestown, . .	3 4	57 65	20.01 19.31	132.87 177.60	B. H. A., . .	None, . . .	More extensive work,	Education of young men and women to the responsibility of parenthood.	Massachusetts General Hospital. I. D. N. A.
North and West Ends.	5	243	29.32	104.74	B. H. A., . .	Massachusetts General Hospital. Boston Dispensary.	Good milk at lower rates. Cleaner streets. More frequent collection of garbage and watering of streets. Somewhere to send children while mothers are confined. Sick baby clinic in North End.	Milk fund for summer. Visiting housekeeper. More nurses. Volunteer workers. More clinics.	Fayette Street Dispensary. Children's Hospital. City Hospital. Homœopathic Hospital. I. D. N. A.
South End, . .	6	71	19.76	94.54	B. H. A., . . . Homœopathic Hospital.	Berkeley Infirmary. City Hospital. Homœopathic Hospital.	Vacation house for mothers and babies. Better educated mothers.	Teaching mothers English. Individual instruction. Little nurses' clubs for girls from 10 to 15 years.	Children's Hospital Fayette Street Dispensary. Boston Dispensary. I. D. N. A.
	7	44	11.09	110.83	None, . . .	None, ...	Developing opportunities for education of mothers.	Individual instruction.	I. D. N. A. B. H. A. Children's Hospital. Boston Dispensary.

INFANT AND CHILD WELFARE AGENCIES IN BOSTON — *Continued.*

DISTRICT.	Wards.	Number of Deaths under One Year.	Birth Rate established per 1,000 Inhabitants.	Death Rate under One Year per 1,000 Births.	POSTNATAL UP TO ONE YEAR.				
					Well Baby Clinics.	Sick Baby Clinics.	Need.	Remedy.	Other Agencies used.
West and South Ends.	8	44	13.23	84.94	None, . . .	Fayette Street Dispensary.	More intensive work,	Individual instruction.	B. H. A. I. D. N. A. Children's Hospital. Boston Dispensary. Homœopathic Hospital. Lincoln House.
South Boston, . .	9 10 11	107 60 68	23.70 25.71 24.10	130.17 88.88 105.43	B. H. A., . .	None, . . .	Sick baby clinic. More intensive postnatal work.	More intensive work. Fewer opportunities to obtain liquor.	Boston Dispensary. City Hospital. I. D. N. A. Children's Hospital.
South End and Roxbury.	12	80	25.26	105.54	B. H. A., . .	None, . . .	A supply of milk which would be quickly available.	Milk fund, . .	Homœopathic Hospital. I. D. N. A. Children's Hospital. City Hospital.
Roxbury Crossing, .	13	84	21.42	125.94	B. H. A., . . Floating Hospital in winter.	Floating Hospital during winter.	Postnatal care of all babies.	Well baby nurse allowed to visit all babies born.	Children's Hospital. City Hospital. Boston Dispensary.
Roxbury, . .	14 15	49 44	21.37 23.29	80.86 70.62	None, . . .	Children's Hospital,	Same as Ward 13, .	Same as Ward 13, .	I. D. N. A. B. H. A.
Grove Hall, . .	16	29	19.72	56.75	B. H. A., . .	None, . . .	More extensive work,	Conferences and demonstrations.	I. D. N. A.
Upham's Corner, .	17	132	20.86	101.81	None, . . .	None, . . .	More extensive work,	Well baby station, .	I. D. N. A. B. H. A.
Fields Corner, . .	18	36	21.33	63.94	B. H. A., . .	Only general clinic at Dorchester Dispensary.	More intensive work,	- -	I. D. N. A.

Dorchester, . .	19 20 21	40 40 38	17.71 21.44 20.20	97.32 79.68 69.59	None, . . .	None, . . .	More extensive work,	Health center, . .	B. H. A. I. D. N. A.
Jamaica Plain, .	22 23	54 29	24.54 23.41	90.60 56.64	None, . . .	Jamaica Plain Dispensary.	Well baby clinic, .	Health center, . .	I. D. N. A. Children's Hospital.
Hyde Park, . .	24	60	25.40	102.39	I. D. N. A., . .	None, . . .	Extension of work among the Italians.	Separate Italian clinic.	- -
Brighton, . .	25 26	30 42	23.61 40.43	75.94 55.40	None, . . .	St. Elizabeth's Hospital.	Well baby clinic, .	Clinic at I. D. N. A. office.	- -

Boston health department nurses visit in all wards doing welfare work. In the city of Boston there were during the year 1916, 714 stillbirths; 2,055 babies died before they reached one year of age; 975 children died between the ages of one and five years.

INFANT AND CHILD WELFARE AGENCIES IN BOSTON — *Continued.*

DISTRICT.	Wards.	ONE YEAR TO FIVE YEARS.		
		Any Organized Supervision.	Where Mothers' Classes can be given.	Greatest Need.
East Boston,	1 2	None,	Trinity Day Nursery. House of Good Will. High school.	Equal in all branches.
Charlestown,	3 4	None,	High school. Kindergarten.	Prenatal, obstetrical and postnatal clinics. Supervision of older child.
North and West Ends.	5	None,	Elizabeth Peabody House. Frances Willard Settlement. Hebrew Industrial School. School centre. North Bennet Industrial School. Denison House. North End Union.	Pregnancy clinic in North End. Sick baby clinic in North End. Nurses present during confinement. Supervision of older child.
South End,	6	Lincoln House has supervised a few. South Bay Union had a club of 30 last winter.	Lincoln House. South Bay Union. All settlement houses.	Supervision of older child.
	7	None,	Schools,	Some way to reach the babies not being supervised. Supervision of older child.
South and West Ends.	8	None,	Schools,	More intensive work. Supervision of older child.
South Boston,	9 10 11	None,	Little House. South Boston High School.	Prenatal and obstetrical clinic. More intensive postnatal work. Supervision of older child.
South End and Roxbury.	12	None,	Roxbury Neighborhood House.	Prenatal and obstetrical clinic at Roxbury Neighborhood House. Supervision of older child.
Roxbury Crossing,	13	Boston Floating Hospital supervised a few.	Norfolk House	Prenatal and obstetrical clinic at Norfolk House. Postnatal care of all babies.
Roxbury,	14 15	None,	Schools,	Same as Ward 13.
Grove Hall,	16	None,	Young Men's Hebrew Association. Schools,	Prenatal and obstetrical clinic. Supervision of older child.
Upham's Corner,	17	None,	Schools,	Prenatal, obstetrical and well baby clinics.
Fields Corner,	18	A few supervised by Dorchester House.	Dorchester House,	Supervision of older child.
Dorchester,	19 20 21	None,	Schools,	Prenatal and obstetrical clinic. Supervision of older child.

INFANT AND CHILD WELFARE AGENCIES IN BOSTON — *Concluded.*

DISTRICT.	Wards.	ONE YEAR TO FIVE YEARS.		
		Any Organized Supervision.	Where Mothers' Classes can be given.	Greatest Need.
Jamaica Plain, .	22 23	None, ...	Jamaica Plain Neighborhood House. St. Thomas Woman's Guild. Community Club at Roslindale.	Well baby clinic. Prenatal and obstetrical clinic. Supervision of older child.
Hyde Park, . .	24	None, ...	Episcopal church, .	Pregnancy clinic. Special well baby clinic with Italian-speaking physician and nurse. Extension of well baby supervision up to fifth year.
Brighton, . . .	25 26	None, ...	Women's Municipal League.	Postnatal clinic. Pregnancy clinic at St. Elizabeth's Hospital and Women's Municipal League.

After consulting with Miss Mary Beard, Director of the Instructive District Nursing Association, and Dr. J. Herbert Young, Director of the Baby Hygiene Association, and taking into consideration the high death rates in the various wards, the following recommendations were made: —

It seems most important to start at once a publicity campaign to acquaint people with the agencies working in the different districts and the kind of aid these agencies give.

It is recommended that the board of health nurses refer all babies to the nearest well baby clinic, or that some arrangement be made so that the well baby nurse can visit every baby born in her district.

The following clinics are urgently needed at the present time: —

Prenatal and obstetrical clinics in Charlestown.

Prenatal and obstetrical clinic, with a woman physician in charge, in the North End.

Sick baby clinic in the North End.

Prenatal and obstetrical and sick baby clinics in South Boston.

Prenatal and obstetrical clinic at Norfolk House, Roxbury.

Prenatal and obstetrical and well baby clinics at Upham's Corner.

Prenatal and obstetrical and well baby clinics at Jamaica Plain.

For future development we recommend: —

1. Supervision of the child up to five years, possibly with clinics held with a physician in charge where the child should be brought for weight and measure-

ments, and where the mother can get the proper advice. Visits should be made in the homes of the children at stated intervals.

2. An obstetrical nurse to be present at home deliveries.
3. More obstetrical beds.
4. Visiting housekeepers.
5. More intensive and extensive prenatal and welfare work.

PRENATAL LETTERS.

IN the Commonwealth of Massachusetts there are approximately 10,000 deaths of infants under one year of age annually. About 4,000 of these deaths occur during the first month of life. A very considerable proportion of the deaths during this first month take place during the first half of the month, and are manifestly the result of conditions existing before the birth of the infant, in the majority of instances. Experience has demonstrated that these conditions are often preventable.

The most effective method of preventing deaths due to such causes is the employment of specially trained nurses to do prenatal work in the homes of expectant mothers, and the establishing of prenatal and obstetrical clinics in centers where the population is sufficient to warrant.

At present, however, such agencies are few and, in the nature of things, are not likely to be generally available for some time to come. To meet this need in part, following a plan successfully carried out by Dr. Lydia De Vilbiss of the Kansas Health Department, the State Department of Health has prepared a series of prenatal letters, one for each month of pregnancy. These letters will be sent monthly to every expectant mother who may apply for them or whose name may be furnished the Department together with a request that the letters be sent to the address given. Letters will be mailed in plain sealed envelopes, and all communications will be regarded as confidential.

Applications should contain the name and address, — street, number, city or town, — together with the expected date of confinement. It is the hope of the Department that this service will meet a certain need, and that it will be freely called for. Address all communications to State Department of Health, Division of Hygiene, State House, Boston, Mass.

REPORT OF THE DIVISION OF FOOD AND DRUGS.

During the month of August, 1917, samples were collected in 52 cities and towns.

There were 591 samples of milk examined, of which 233 were below the legal standard, 7 samples were skimmed milk not properly labeled, and 75 samples contained added water.

There were 170 samples of food examined, of which the following were adulterated: 2 samples of scrap salt codfish were decomposed, containing a red mold; 16 samples of ice cream contained less than 7 per cent. of milk fat; and 1 sample of sweet potatoes was decomposed.

There were 5 samples of drugs examined, of which 1 sample of spirit of nitrous ether was deficient in ethyl nitrite, and 1 prescription of fennel water and boric acid, submitted by a citizen, was found to consist of sweet spirit of niter and to contain no boric acid.

The police departments submitted 22 samples of narcotics and 10 samples of liquor for examination.

There were 13 convictions for violation of the laws, $420 in fines being imposed. Everett Bowen of Middleborough, Joseph F. Burgess of Walpole, Ernest F. Doty of Beverly, James Gordan of Nahant, Eugene R. Hawes of Foxborough, Louis E. Roberts of Lexington, Adam Robson of Salem, Emma Smith of Salem and Marie Waitt of Lynn were convicted for violation of the milk laws. Everett Bowen of Middleborough appealed his case, and the sentence against Louis E. Roberts was suspended until June, 1918. Thomas H. Farrell of Pittsfield and Arthur R. Vincent of Holyoke were convicted of violating the drug laws. The Meyer's Store, Inc., of Pittsfield was convicted for selling adulterated ice cream, and Louis F. Langley of Gloucester was convicted for violating the slaughtering laws. Louis F. Langley appealed his case.

There were 6 confiscations made, consisting of 566 pounds of meat and poultry in cold-storage warehouses, a shipment of 750 pounds of decomposed sweet potatoes, and 25 pounds of miscellaneous meat in stores.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

Five samples of milk containing added water, produced by Samuel Finman, Pelham, N. H.; 1 sample of milk containing added water, produced by Louis E. Roberts of Lexington; 13 samples of milk containing added water, produced by Louis Sykes of Norwood; 2 samples of milk containing added water, produced by Eugene R. Hawes of Foxborough; 1 sample of milk containing added water, produced by Artemas Robertson of West Harwich; 1 sample of milk containing added water, produced by J. O. Hulse of Harwichport; 10 samples of milk containing added water, produced by Joseph F. Burgess of Foxborough; 1 sample of milk containing added water, produced by William C. Tucker of Chelmsford; 1 sample of skimmed milk not properly labeled, produced by Frederick H. Fuller of Foxborough; 14 samples of ice cream containing less than 7 per cent. of milk fat, manufactured by the Davis Ice Cream Company of Cambridge; and 2 samples of ice cream containing less than 7 per cent. of milk fat, produced by Guy Clay of Marblehead.

Reports to this Department for July from the 73 licensed cold-storage warehouses in Massachusetts show a storage of food amounting to nearly 20,000,000 pounds during July, and also show that on August 1 there were stored 18,500,000 dozens of eggs and 17,000,000 pounds of butter.

The figures are as follows: —

Placed in Cold Storage in July, 1917.

Eggs, case (dozens),	1,062,210
Eggs, broken out (pounds),	184,613
Butter (pounds),	9,591,786
Poultry (pounds),	762,887
Game (pounds),	1,157
Meat, fresh, and meat products, fresh (pounds),	3,100,358
Fish, fresh food (pounds),	5,164,994
Total,	19,867,955[1]

Butter and Eggs in Cold Storage Aug. 1, 1917.

Eggs, case (dozens),	18,586,390
Eggs, broken out (pounds),	650,096
Butter (pounds),	17,073,581
Total,	36,310,067[1]

Twenty-five cold-storage licenses have been granted.

Five requests for extension of time in cold storage were made, of which 3 were granted and 2 refused. One request for immediate removal of goods was granted, and 4 lots of goods, upon which the twelve months' storage had expired, were ordered out of storage.

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[1] Inasmuch as the contents of 1 dozen eggs weigh about 1 pound, the dozens of eggs are added as pounds.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF AUGUST, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of August, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, . . .	604	93	311	40	160

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis, ...	310	86	224	
*Typhoid fever (Widal test), . .	278	79	192	17
Typhoid fever (culture test), . .	68	1	67	
Malaria, ...	12	–	12	
Gonorrhœa, ...	143	26	117	
Miscellaneous, ...	85	7	78	

Total number of examinations made, 1,510.

THE TRAIL OF A TYPHOID CARRIER.

In June, 1915, the proprietor of the L farm in Gardner started a milk route. By August typhoid fever had occurred in three of the six families supplied by this farm.

During 1916 there were two more cases on this same route. In both years it was suspected that a typhoid carrier was employed on the farm. However, Widal tests and examinations of feces and urine from every one on the farm were negative.

In April, 1917, there was an explosive outbreak of typhoid fever numbering 20[1] cases, all of which were on the route of K, to whom L sold his milk for distribution. A careful investigation by the State Department of Health, together with the local board of health, brought forth the fact that the proprietor of the L farm had typhoid bacilli in his feces, although his blood was negative by the Widal test, and he denied ever having had typhoid fever.[1] The sale of milk from this farm was prohibited.

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[1] Previously reported as 21 cases.

On May 6, L was again licensed to sell milk, with the agreement that he personally would have absolutely nothing to do with the handling of the milk or the utensils used.

In August, beginning the 16th of the month, 54 cases of typhoid were reported, many of which had their onset several days before a physician was called. All of these cases occurred on the route of the distributor, who obtained milk from nine dairies including that of the L farm. The sale of milk from all of the dairies concerned was stopped at once. Subsequently, Widal tests and examinations of the feces and urine of persons at eight of the dairies were negative. The ninth dairy was on the L farm, being the same source of supply which was under suspicion in 1915 and 1916, whose proprietor was found to be a carrier in April of this year. Thus L was proven to be an intermittent carrier with a negative Widal test.

The conclusion to be drawn is that no known typhoid carrier should be permitted to produce milk for sale or distribution, or to engage in any way in the handling of milk or other food products.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR AUGUST, 1917.

General Prevalence.

There were 3,176 cases of communicable diseases reported during August, a marked decrease as compared with the total of 4,600 cases reported for July. In August, 1916, 3,172 cases were reported.

Diphtheria and pulmonary and non-pulmonary forms of tuberculosis show an increase in the State, compared with August, 1916.

Customarily, the incidence of diphtheria should decrease from July to August, but this year it remains practically stationary, 597 cases being reported in July and 592 in August.

Anthrax. — Two cases of anthrax were reported. One, confirmed bacteriologically, was a freight handler who had presumably been handling raw hides from South America. The other case was an embosser of finished leather. Laboratory results were negative, but the use of antiseptic solutions may have interfered with the tests.

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[1] This carrier was eventually found on the L farm rather than on the K farm, as suggested in the May Bulletin.

Smears and cultures of suspected anthrax cases should be taken at once before treating to insure finding the anthrax bacilli.

Smallpox. — One case of smallpox in Ware was a traveling salesman who had been in Connecticut and Worcester, Mass., a short time before the onset. The patient whose illness was of a mild type was vaccinated in 1902. There were no cases reported from Worcester in August.

Cerebrospinal Meningitis. — There were 19 cases of this disease reported, a larger number than usual for August. The cases were all scattered, no locality reporting more than 2 cases except Boston, where 4 were reported.

Poliomyelitis. — The danger of an epidemic of this disease is now practically over, as only 39 cases were reported during August, an increase of 1 case over July. The only unusual prevalence of the disease was in Haverhill, where 20 cases were reported.

Diseases on the Premises of Milk Handlers. — During the month 2 cases of typhoid fever, 5 cases of septic sore throat and 2 cases of diphtheria occurred in families of milk handlers.

EPIDEMICS AND OUTBREAKS.

Dysentery. — During July and August 75 cases of dysentery were reported from the Grafton State Hospital, 45 being in the Worcester Department, with 3 deaths, and 30 in the Grafton Colony, the cases being confined to two buildings.

The cases in the Worcester Department were confined to the inmates, but in the Grafton Colony two nurses and two staff physicians had the disease.

The disease was characterized with a sudden onset, fever, abdominal pain, frequent copious watery stools, occasionally accompanied with blood and mucus, and heavy, white-coated tongue, the duration of the attack averaging four days.

No persons handling milk or food were sick, and the source of the outbreak was not determined.

Typhoid Fever. — An epidemic of 54 cases occurred in Gardner due to a carrier on a milk farm. (See separate article.)

Septic Sore Throat. — An epidemic of septic sore throat occurred during the first week of August in Natick, Wellesley and Dover. There were 119 known cases of the disease and two deaths due to streptococcic septicæmia.

Attention was first called to the presence of an epidemic by the finding of hemolytic streptococci in the peritoneal fluid of a patient who had developed peritonitis.

An immediate investigation showed that the majority of the cases were on the route of one milk distributor who obtained his supply from three places, the C, H and M farms.

Hemolytic streptococci were found in the throat of two milk handlers on the C farm, and in the throat of a member of the milk distributor's family. Streptococci were also found in the throat of a milk handler working for the distributor, but the hemolytic character of the organisms was not determined.

On the C farm was found also a cow discharging large numbers of non-hemolytic streptococci.

The epidemic was stopped by the isolation of all known cases on the farms, sterilization of milk utensils, pasteurization of milk and the exclusion of the above-mentioned cow from the herd.

RARE DISEASES.

Anterior poliomyelitis was reported from Acton, 1; Boston, 1; Brockton, 2; Fall River, 1; Haverhill, 20; Hingham, 1; Lowell, 1; Lynn, 2; Marlborough, 1; Natick, 2; Northampton, 1; Saugus, 1; Stoneham, 2; Winchendon, 2; Worcester, 1.

Cerebrospinal meningitis was reported from Barnstable, 1; Boston, 5; Fall River, 1; Gloucester, 2; Lawrence, 1; Lowell, 2; Lynn, 1; New Bedford, 2; Peabody, 1; Pittsfield, 1; Somerville, 1; Springfield, 1.

Dog bite was reported from Chelsea, 1; Lowell, 1; Waltham, 1.

Dysentery was reported from Boston, 39; Fall River, 2; Greenfield, 5; Newton, 1; Peabody, 1.

Glanders was reported from Tewksbury, 1.

Malaria was reported from Boston, 2; Brookline, 1; Cambridge, 1; Danvers, 1; Dedham, 4; Foxborough, 1; Medfield, 1; Milford, 1; Northampton, 1.

Pellagra was reported from Boston, 1; Danvers, 1; Peabody, 1; Tewksbury, 1.

Septic sore throat was reported from Boston, 6; Dover, 1; Natick, 26; Newton, 1; Wellesley, 2.

Smallpox was reported from Ware, 1.

Tetanus was reported from Brockton, 1; Dennis, 1; New Bedford, 1; Peabody, 1; Springfield, 2; Westfield, 1; Winchester, 1.

Trachoma was reported from Boston, 5; Brockton, 1; Lynn, 1; Peabody, 1; Worcester, 2.

Trichinosis was reported from Boston, 1.

DISTRIBUTION.

All Communicable Diseases.

	July, 1917.	August, 1917.	August, 1916.
Total cases, ...	4,598	3,176	3,172
Case rate per 100,000 population, ...	119.5	82.6	84.1

Certain Prevalent Diseases.

	July, 1917.	August, 1917.	August, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[1]
Diphtheria:—				
Total cases, ...	597	590	480	Fall River, . . (5) 22 Melrose, . . (1) 20 Gardner, . . (0) 33
Case rate per 100,000 population, .	15.5	15.3	12.7	
Measles:—				
Total cases, ...	1,347	380	582	
Case rate per 100,000 population, .	35.0	9.9	15.4	
Scarlet fever:—				
Total cases, ...	241	145	154	
Case rate per 100,000 population, .	6.3	3.8	4.1	
Typhoid fever:—				
Total cases, ...	108	247	268	Acushnet, . . (0) 5 Fall River, . . (12) 35 Gardner, . . (0) 56
Case rate per 100,000 population, .	2.8	6.4	7.1	
Whooping cough:—				
Total cases, ...	344	338	402	
Case rate per 100,000 population, .	8.9	8.8	10.7	
Tuberculosis, pulmonary:—				
Total cases, ...	841	706	624	
Case rate per 100,000 population, .	21.9	18.4	16.5	
Tuberculosis, other forms:—				
Total cases, ...	64	67	47	
Case rate per 100,000 population, .	1.7	1.7	1.2	

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[1] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers with parentheses indicate the cases reported during the current month.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

DISEASE.	Occupation.	Locality.	Sex.	Age.	Color.
Anthrax, . . .	Leather finisher, . .	Salem, ...	M	45	W
Anthrax, . . .	Freight handler, . .	Boston, ...	M	–	–
Lead poisoning, . .	Fireman, . . .	Boston, ...	M	37	W
Lead poisoning, . .	Iron worker, . .	Boston, ...	M	31	W
Lead poisoning, . .	– –	Boston, ...	M	27	W
Lead poisoning, . .	Painter, ...	Cambridge, ...	M	50	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	38	**7**	203	–	597	**43**	215	**1**	80	**81**	1,347	**28**
2	CITIES OVER 200,000.													
3	Boston,	778,500	–	–	46	–	222	**15**	46	–	12	**21**	362	**11**
4	CITIES, 150,000–200,000.													
5	Worcester,	170,077	1	**1**	6	–	20	**1**	5	–	11	**3**	25	**3**
6	CITIES, 100,000–150,000.	*570,968*	*5*	*2*	*19*	–	*110*	*5*	*18*	–	*5*	*10*	*148*	*5*
7	Fall River,	127,218	–	–	2	–	9	**1**	4	–	1	**2**	41	**3**
8	New Bedford,	115,272	–	–	4	–	6	**1**	1	–	–	**2**	60	**2**
9	Cambridge,	110,582	–	–	3	–	22	–	4	–	1	**2**	25	–
10	Springfield,	109,174	2	**1**	7	–	15	**3**	9	–	3	**3**	18	–
11	Lowell,	108,722	3	**1**	3	–	58	–	–	–	–	**1**	4	–
12	CITIES, 50,000–100,000.	*511,498*	*19*	*1*	*24*	–	*61*	*4*	*18*	–	*14*	*10*	*106*	*1*
13	Lynn,	98,659	5	–	1	–	9	–	2	–	5	**2**	30	**1**
14	Lawrence,	92,187	2	–	6	–	11	–	1	–	1	**2**	2	–
15	Somerville,	91,102	–	–	2	–	19	**2**	7	–	1	**2**	24	–
16	Brockton,	64,668	1	–	5	–	4	–	1	–	–	–	2	–
17	Holyoke,	62,179	–	–	1	–	1	–	2	–	2	**2**	17	–
18	Haverhill,	51,806	10	–	5	–	3	–	1	–	4	**1**	4	–
19	Malden,	50,897	1	**1**	4	–	14	**2**	4	–	1	**1**	27	–
20	CITIES AND TOWNS, 25,000–50,000.	*498,330*	*3*	*2*	*32*	–	*68*	*6*	*32*	*1*	*11*	*13*	*217*	*2*
21	Chelsea,	48,273	–	–	9	–	12	**2**	1	–	3	**3**	13	**1**
22	Newton,	44,573	–	–	6	–	6	**1**	2	–	–	–	23	–
23	Quincy,	44,221	1	**1**	3	–	7	–	–	–	1	**1**	13	–
24	Pittsfield,	42,913	–	–	–	–	–	–	7	**1**	–	**2**	34	–
25	Fitchburg,	40,464	–	–	1	–	9	–	–	–	–	–	23	–
26	Salem,	39,872	1	**1**	5	–	7	–	2	–	2	**2**	2	–
27	Everett,	39,588	–	–	4	–	5	–	7	–	1	**1**	29	–
28	Taunton,	37,001	–	–	–	–	1	**1**	–	–	–	–	–	–
29	Brookline,	36,007	–	–	1	–	1	–	3	–	1	–	10	–
30	Medford,	33,758	1	–	2	–	1	–	9	–	–	–	8	–
31	Chicopee,	32,230	–	–	1	–	7	**2**	1	–	1	**2**	7	–
32	Waltham,	31,179	–	–	–	–	4	–	–	–	1	**2**	55	**1**
33	Revere,	28,251	–	–	–	–	8	–	–	–	1	–	–	–
34	CITIES AND TOWNS, 10,000–25,000.	*569,407*	*5*	*1*	*43*	–	*63*	*4*	*49*	–	*20*	*11*	*181*	*5*
35	Beverly,	24,863	2	–	–	–	–	–	–	–	–	–	1	–
36	Gloucester,	24,513	–	–	3	–	1	**1**	5	–	2	**3**	–	–
37	Northampton,	22,636	–	–	2	–	–	–	2	–	–	–	5	–
38	North Adams,	22,042	–	–	–	–	–	–	–	–	–	–	40	–
39	Peabody,	19,908	–	–	–	–	–	–	–	–	1	–	1	–
40	Attleboro,	19,480	–	–	2	–	1	–	1	–	1	–	2	–
41	Westfield,	19,456	–	–	1	–	6	–	4	–	3	**1**	4	**1**
42	Watertown,	18,123	–	–	2	–	6	–	–	–	–	–	–	–
43	Leominster,	17,675	–	–	–	–	2	–	1	–	1	–	2	–
44	Melrose,	17,394	–	–	3	–	2	–	3	–	–	**1**	8	–
45	Framingham,	17,146	–	–	1	–	–	–	1	–	3	**1**	6	–
46	Gardner,	17,116	–	–	–	–	8	–	1	–	–	–	7	–
47	Woburn,	16,896	–	–	–	–	–	–	–	–	–	–	–	–
48	Arlington,[2]	16,524	–	–	3	–	4	–	14	–	–	–	53	–
49	Marlborough,	15,546	–	–	9	–	–	–	3	–	–	–	1	–
50	Newburyport,	15,470	–	–	1	–	1	–	1	–	–	–	4	–
51	Methuen,	15,137	–	–	–	–	1	–	–	–	–	**1**	–	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and

[2] Includes some June cases not reported until July.

TO THE PUBLIC HEALTH,[1] JULY, 1917.

19C		38A		7		28-29		30-35		1		8		61A		176A		4		100		
Mumps.		Ophthalmia Neonatorum.		Scarlet Fever.		Tuberculosis, Pulmonary.		Tuberculosis, Other Forms.		Typhoid Fever.		Whooping Cough.		Cerebrospinal Meningitis.		Dog Bite.		Malaria		Septic Sore Throat		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
287	–	152	1	241	5	834	372	64	70	108	13	344	19	15	19	9	–	11	2	27	3	1
																						2
63	–	61	–	55	3	329	108	19	17	12	2	105	1	4	5	–	–	6	–	1	1	3
																						4
5	–	8	–	13	–	46	11	1	5	5	1	8	3	–	–	1	–	–	–	–	–	5
25	–	*36*	*1*	*37*	*1*	*122*	*48*	*10*	*19*	*28*	*4*	*63*	*8*	*1*	*5*	*1*	–	–	–	*2*	–	6
10	–	12	1	10	–	30	13	2	2	14	1	27	4	–	–	1	–	–	–	–	–	7
2	–	7	–	3	–	44	12	4	5	3	1	7	2	1	2	–	–	–	–	–	–	8
8	–	10	–	4	–	17	8	–	4	3	2	12	–	–	–	–	–	–	–	1	–	9
5	–	5	–	18	1	18	13	2	4	4	–	17	2	–	3	–	–	–	–	1	–	10
–	–	2	–	2	–	13	2	2	4	4	–	–	–	–	–	–	–	–	–	–	–	11
35	–	*14*	–	*35*	–	*77*	*39*	*6*	*5*	*13*	*3*	*46*	*2*	*4*	*4*	–	–	–	–	*1*	–	12
–	–	4	–	11	–	12	6	2	1	8	1	21	–	–	1	–	–	–	–	–	–	13
1	–	1	–	2	–	13	10	2	2	1	–	9	–	–	–	–	–	–	–	–	–	14
3	–	2	–	14	–	13	4	–	–	2	–	–	–	–	–	–	–	–	–	1	–	15
25	–	3	–	3	–	8	3	–	1	–	–	10	–	1	–	–	–	–	–	–	–	16
–	–	1	–	2	–	9	7	–	1	–	1	–	1	–	–	–	–	–	–	–	–	17
2	–	2	–	2	–	8	6	1	–	2	1	6	1	2	2	–	–	–	–	–	–	18
4	–	1	–	1	–	14	3	1	–	–	–	–	–	1	1	–	–	–	–	–	–	19
36	–	*16*	–	*25*	–	*83*	*51*	*14*	*9*	*16*	–	*45*	*1*	*4*	*3*	*1*	–	*2*	*1*	*3*	–	20
–	–	4	–	5	–	13	8	–	1	3	–	11	1	–	–	–	–	–	–	–	–	21
11	–	–	–	3	–	1	1	–	1	4	–	1	–	–	–	–	–	–	–	1	–	22
–	–	1	–	3	–	7	3	1	1	1	–	–	–	–	–	–	–	–	–	–	–	23
1	–	3	–	–	–	13	5	5	1	–	–	6	–	3	1	–	–	–	–	–	–	24
5	–	–	–	5	–	8	4	1	–	1	–	–	–	–	–	–	–	–	–	–	–	25
1	–	1	–	–	–	7	8	4	1	–	–	17	–	–	–	–	–	–	–	–	–	26
2	–	3	–	–	–	3	–	1	–	3	–	2	–	1	–	–	–	–	–	–	–	27
–	–	1	–	5	–	4	2	1	1	1	–	–	–	–	–	–	–	–	–	–	–	28
1	–	–	–	1	–	4	3	–	–	–	–	–	–	–	–	–	–	–	–	1	–	29
3	–	1	–	1	–	4	2	–	–	1	–	–	–	–	–	1	–	–	–	1	–	30
–	–	–	–	–	–	13	7	–	–	1	–	5	–	–	1	–	–	2	–	–	–	31
12	–	2	–	1	–	4	8	1	3	–	–	3	–	–	1	–	–	–	1	–	–	32
–	–	–	–	1	–	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	33
55	–	*11*	–	*35*	–	*94*	*29*	*11*	*8*	*16*	*2*	*37*	*1*	*2*	*1*	*3*	–	*3*	*1*	*17*	*2*	34
–	–	2	–	1	–	3	2	–	–	1	–	2	–	–	–	–	–	–	–	–	–	35
–	–	–	–	–	–	4	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	36
–	–	–	–	8	–	4	7	1	1	–	–	3	–	1	–	1	–	–	–	–	–	37
–	–	–	–	–	–	10	1	1	1	1	1	–	–	–	–	–	–	–	–	–	–	38
–	–	–	–	1	–	8	–	–	1	1	–	1	–	–	–	–	–	–	–	–	–	39
–	–	1	–	–	–	4	–	–	–	–	–	–	–	1	–	2	–	–	–	–	–	40
–	–	2	–	7	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41
–	–	–	–	1	–	3	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	42
–	–	–	–	2	–	2	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	43
–	–	3	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	44
6	–	–	–	–	–	10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	45
–	–	–	–	–	–	5	2	1	1	3	–	–	–	–	–	–	–	–	–	–	–	46
–	–	–	–	–	–	–	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	47
–	–	–	–	–	–	5	–	–	–	1	–	2	–	–	1	–	–	–	–	2	–	48
2	–	–	–	–	–	5	–	–	–	–	–	5	–	–	–	–	–	–	–	–	–	49
–	–	–	–	–	–	3	–	1	–	1	1	–	–	–	–	–	–	–	–	–	–	50
–	–	–	–	4	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	51

correction, the deaths given above, while approximately correct, are not absolutely complete.

Cases and Deaths from Diseases Dangerous

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,930	–	–	–	–	1	1	–	–	–	–	–	–
53	Weymouth,	14,444	1	1	–	–	–	–	–	–	–	–	–	–
54	Milford,	13,962	–	–	–	–	5	–	–	–	–	–	1	–
55	Winthrop,	13,918	–	–	2	–	–	–	4	–	4	–	1	–
56	Greenfield,	13,590	–	–	5	–	–	–	2	–	1	1	–	–
57	Wakefield,	13,389	–	–	3	–	4	–	–	–	–	–	7	–
58	Adams,	13,302	–	–	–	–	–	–	–	–	–	–	6	–
59	Plymouth,	13,273	–	–	–	–	–	–	1	–	–	–	3	–
60	Clinton,	13,243	–	–	–	–	1	–	–	–	–	–	2	–
61	Webster,	13,031	–	–	–	–	3	1	–	–	–	–	–	–
62	Norwood,	12,286	–	–	–	–	–	–	2	–	–	–	–	–
63	West Springfield,	12,273	–	–	–	–	1	–	–	–	–	1	–	–
64	Danvers,	11,955	–	–	3	–	1	–	2	–	–	1	4	–
65	Dedham,	11,820	–	–	–	–	3	1	1	–	–	–	–	–
66	Natick,	11,673	–	–	1	–	3	–	–	–	–	–	1	–
67	Saugus,	11,189	2	–	–	–	2	–	–	–	–	–	–	1
68	Easthampton,	10,430	–	–	1	–	1	–	–	–	1	–	5	1
69	Athol,	10,333	–	–	–	–	3	–	–	–	1	–	16	2
70	Winchester,	10,312	–	–	1	–	–	–	1	–	–	–	1	–
71	Bridgewater,	10,129	–	–	–	–	3	–	–	–	2	1	–	–
72	TOWNS, 5,000–10,000.	*355,823*	–	–	*17*	–	*24*	*2*	*12*	–	*5*	*5*	*65*	–
73	TOWNS, 2,500–5,000.	*181,232*	*1*	–	*7*	–	*15*	*4*	*10*	–	*1*	*5*	*75*	*1*
74	TOWNS UNDER 2,500.	*213,171*	*4*	–	*2*	–	*14*	*2*	*25*	–	*1*	*3*	*167*	–
75	STATE INFIRMARY,		–	–	*7*	–	–	–	–	–	–	–	*1*	–

In addition to the above there occurred 8 cases of dysentery, 7 in Boston and 1 in Holyoke, with 2 deaths, in Gardner, with 2 deaths, 1 in New Bedford and 1 in Pittsfield; 5 cases of trachoma, 1 in Boston, 2 in deaths, 1 in Danvers, 1 in Milford and 1 in Stoneham.

TO THE PUBLIC HEALTH — *Concluded.*

19C		38A		7		28-29		30-35		1		8		61A		176A		4		100		
Mumps.		Ophthalmia Neonatorum.		Scarlet Fever.		Tuberculosis, Pulmonary.		Tuberculosis, Other Forms.		Typhoid Fever.		Whooping Cough.		Cerebrospinal Meningitis.		Dog Bite.		Malaria.		Septic Sore Throat.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	–	–	–	–	3	1	2	2	–	–	–	–	–	–	–	–	–	–	–	–	52
–	–	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	53
1	–	–	–	–	–	2	1	–	1	–	–	1	–	–	–	–	–	–	1	–	–	54
15	–	–	–	1	–	–	–	–	–	–	–	6	–	–	–	–	–	–	–	–	–	55
12	–	1	–	6	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	56
–	–	–	–	1	–	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	57
2	–	–	–	–	–	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	58
–	–	–	–	–	–	2	–	–	–	2	–	–	–	–	–	–	–	–	–	–	1	59
–	–	–	–	–	–	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	60
–	–	–	–	–	–	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	61
2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	62
–	–	–	–	1	–	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	63
–	–	–	–	–	–	1	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	64
–	–	–	–	–	–	–	–	–	–	1	–	7	–	–	–	–	–	2	–	2	1	65
1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	13	–	66
–	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	67
–	–	–	–	–	–	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	68
–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	69
14	–	–	–	1	–	–	–	–	–	–	–	4	–	–	–	–	–	–	–	–	–	70
–	–	–	–	–	–	1	3	–	–	–	–	6	–	–	–	–	–	–	–	–	–	71
34	–	*3*	–	*17*	*1*	*43*	*22*	*3*	*1*	*10*	*1*	*16*	*1*	–	*1*	*2*	–	–	–	*3*	–	72
8	–	*2*	–	*9*	–	*10*	*11*	–	*2*	*4*	–	*10*	*2*	–	–	–	–	–	–	–	–	73
26	–	*1*	–	*9*	–	*10*	*35*	–	*3*	*4*	–	*14*	–	–	–	*1*	–	–	–	–	–	74
–	–	–	–	*6*	–	*20*	*18*	–	*1*	–	–	–	–	–	–	–	–	–	–	–	–	75

1 in Springfield and 1 in Worcester; 1 case of smallpox in Worcester; 2 cases of tetanus, 1 in Boston and 1 Chelsea, 1 in Lynn and 1 in Worcester; and 2 cases of pellagra, 1 in Milford and 1 in Natick, with 3

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

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The Connecticut Valley District,	John S. Hitchcock, M.D., Northampton.
The Berkshire District,	Howard A. Streeter, M.D., Pittsfield.

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[1] Leave of absence, military service.

[2] Temporary Health Officer.

PUBLIC HEALTH BULLETIN

ISSUED MONTHLY
BY THE
STATE DEPARTMENT OF HEALTH
OF MASSACHUSETTS

October, 1917

Vol. 4, No. 10

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass., under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

COMMON COLDS.

THE most prevalent illness in the United States is the common cold, a disease group included under one name and considered of such minor importance that vital statistics do not record the enormous number of persons who annually are subjected to suffering, inconvenience, and economic loss thereby. Remarkable as it may seem, the widespread familiarity with this condition has bred a contempt which hides its seriousness, yet when the sum total of the ravages committed by common colds is made, it becomes evident that instead of being a group of trivial affections, common colds must be classed as serious diseases.

The phrase "common colds," like "charity," covers a multitude of sanitary sins, and curiously enough the name has been applied to a group of affections which, far from depending absolutely on cold, are frequently the direct result of living in close, overheated surroundings having a lower relative humidity than the dryest desert known to man.

The word "colds" means an acute infection of the lining membranes of the nose, tonsils, throat and larger bronchial tubes. The process may be even more extensive and amount to a general infection of the entire body. All of the breathing apparatus excepting the smaller terminal portions in the lungs may be involved, and as a matter of fact the disease may, and often does, spread to these, thus producing pneumonia. In this connection it may be pointed out that pneumonia kills more people in the United States than any other disease excepting tuberculosis and heart disease. Many pneumonias begin as a common cold. Colds do not produce tuberculosis, yet unfortunately what is considered as a cold may be in reality the first symptoms of the white plague.

The causes of colds are multiform and not entirely understood. In every case, however, they are dependent upon the growth and activity of living germs which are always received from other people. It is true that almost everybody harbors disease organisms in the mouth and nose, and that these, under favorable conditions, will produce a cold in their host. But these germs in every case were received from some other person. In other words, colds are infectious. It used to be thought that sitting in a draft or a prolonged stay in the swimming pool would produce a cold. This is erroneous, but the chilling of the body which the draft produces and the weakening of the vital forces caused by too long a swim lower the powers of resistance, and permit germs which have hitherto been harmless to their host to produce their disastrous effects.

It is not necessary to describe a cold. Everybody is familiar with it in all its variations, from the simple ordinary coryza, which is a polite running at the nose, to the sore throat, the aching chest, fever, and generally "knocked out" feeling. The cough, the sneeze, the headache and the varying degrees of inefficiency which a cold produces are, alas, only too well known. Common colds occur in epidemics and are distinctly contagious. They sweep through an entire household, an entire city, an entire State, attacking the young, the adolescent, the middle aged, and frequently carrying off the aged, the weak and the debilitated. Schools, factories, stores are suddenly crippled by epidemics of this sort, and the complications and serious disorders following the disease add to the great economic loss produced in this way. Infection of the cavities beneath the cheeks and brows, ear derangements, chronic lung infections, rheumatism, heart disorders, kidney impairment and depressed vitality may all follow in the train of this widespread infection.

To prevent a cold it is necessary first of all to keep the body resistance at a high point of efficiency. This means that the body machinery should be kept in good order at all times. Good wholesome food in proper amount, plenty of sleep, the careful attendance to the voiding of the body wastes, the taking of regular exercise in the open air, keeping the body clean, keeping the mouth and nose clean, the avoidance of hot, stuffy, dusty rooms, the avoidance of exposure to sudden changes of temperature, the prevention of the chilling of the body either by cold or wet, are all protective measures. It should be borne in mind, however, that even robust persons may contract colds from people who have them.

The germs of colds leave the body in the secretions of the mouth and nose. They enter the body through the same route. Thus a careless sneezer and the person who does not cover his mouth and nose when he coughs are breeders of these infections. The little living bodies which cause colds are so small that a million could rest on the head of a pin. When a person coughs or sneezes a fine spray carrying with it untold numbers of these germs is spread into the surrounding atmosphere to a distance of several feet, and may easily be taken into the mouth and nose with the respired air. More direct contact, such as by kissing, the common drinking cup, the common roller towel, by pipes, toys, pencils, fingers, food, and other things which have been contaminated by the mouth and nose secretions of a person having a cold, may also carry the disease.

It is an obligation on the part of persons having colds to see to it that they do not spread these colds to somebody else. The person who neglects to cover his nose and mouth when he sneezes and coughs, the careless spitter, the person who permits his germ-laden discharges to contaminate things which are going to be handled by other people, is a menace to the community. If such a person uses public swimming pools, if he is not amenable to reason and persists in distributing his infection, he should be avoided as a spreader of pestilence.

A good deal has been said about hardening people so that they will not contract colds. There is an element of danger in this since to expose a weak person to the rigors of cold baths and cold drafts is apt to lower resistance, thus favoring the very condition which it is desired to avoid. At the same time, it should not be forgotten that the arctic explorer does not ordinarily have colds so long as he stays out in the open, and that it is not the engineer and fireman in the cold, drafty cab who have colds but those who ride in the close, dusty overheated coaches behind. When all is said, it must be admitted that dusty, unventilated rooms perhaps play the greatest rôle in producing colds.

Since colds are a serious condition they should be treated as such. A great many people think that they have an infallible remedy for breaking up a cold. This may be harmless in itself, but usually it is not, and consists of a combination of harmful drugs and alcohol, the latter usually preponderating. The sufferer takes these preparations in large quantities, and if he is strong enough he may survive them and eventually get the best of his cold. Self medication or medication by untrained persons is always dangerous. It is especially dangerous to those having colds and should always be scrupulously avoided. As a rule, much time, inconvenience and suffering will be obviated by consulting an intelligent physician promptly. If this is not practicable a brisk saline may be taken and the patient put to bed. This gives his body an opportunity to regain its vitality and at the same time isolates him from other people. The sick room should be well ventilated and the windows so opened as to keep the air moving freely. It is also wise to moisten the air a little bit by putting a pan of water on the radiator or over the register or on the stove. The handkerchiefs and bedding used by the patient should be sterilized by boiling. Kissing, and the use of drinking cups and towels, etc., in common with other members of the household should be forbidden, it being borne in mind constantly that colds are infectious and readily spread from one person to another.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of September, 1917, samples were collected in 38 cities and towns.

There were 602 samples of milk examined, of which 123 were below the legal standard, 24 samples were skimmed milk not properly labeled, and 19 samples contained added water.

There were 113 samples of food examined, of which the following were adulterated: 29 samples of decomposed eggs, 1 sample of fish containing added fish bone, 2 samples of ice cream containing less than 7 per cent. of milk fat, and 2 samples of sausage containing starch in excess of 2 per cent.

There were 42 samples of drugs examined, of which 6 were adulterated. These consisted of 1 sample of alcohol not up to the required strength, 3 samples of camphorated oil deficient in camphor, and 2 samples of spirit of peppermint deficient in peppermint.

The police departments submitted 20 samples of poisons and 1 sample of liquor for examination.

There were 15 convictions for violation of the laws, $460 in fines being imposed. John Adams of Natick, Edward Charpentier, M. I. De Mello and James Haggis of New Bedford, Jesse A. Dutra, B. F. Eaton and Manuel Suzan of Falmouth, John B. Silvia, Manuel Perry and Frank E. Perry of Dartmouth, Artemus Robertson of Harwich, Frank W. Woodward of Northampton, George O. Woodbury of Barnstable, and Louis Sykes of Norwood were convicted for violation of the milk laws. Messrs. Woodbury of Barnstable and Sykes of Norwood appealed their cases. Raymond Keefe of Lawrence was convicted for violation of the food laws.

There was 1 confiscation made, consisting of 10 pounds of decomposed pork.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

One sample of milk containing added water, produced by Matthew J. Bennett of Woburn; 8 samples of milk containing added water, produced by Frank A. Boyd of Essex, 1 sample of skimmed milk not properly labeled, produced by Frank Gentarz of Ipswich; 1 sample of milk containing added water, produced by Frank Silvia of Dartmouth; 1 sample of milk containing added water, produced by Perry Brothers of Dartmouth; 29 samples of decomposed eggs, from J. R. Poole & Co.

of Boston; 1 sample of fish containing added fish bone, from Pierce, Austin, Caswell, Livermore Company of Boston; 1 sample of ice cream containing less than 7 per cent. of milk fat, manufactured by the Davis Ice Cream Company of Cambridge; and 1 sample of sausage containing starch in excess of 2 per cent., manufactured by the Siebel Provision Company of Roxbury.

The licensed cold-storage warehouses report the following amounts of food placed in storage during the month of August, 1917: 352,510 dozens case eggs, 116,500 pounds broken-out eggs, 5,996,227 pounds butter, 370,136 pounds poultry, 422 pounds game, 4,053,333 pounds fresh meat and fresh meat products, and 3,789,216 pounds fresh food fish, making a total of 14,678,344 pounds.

There was on hand in storage on Sept. 1, 1917, 17,053,573 dozens case eggs, 652,541 pounds broken-out eggs, and 19,784,394 pounds butter, making a total of 37,490,508 pounds.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF SEPTEMBER, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of September, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, . . .	876	113	542	62	159

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis, ...	282	76	206	
*Typhoid fever (Widal test), . .	346	101	231	14
Typhoid fever (culture test), . .	139	11	128	
Malaria, ...	4	–	4	
Gonorrhœa, ...	118	14	104	
Miscellaneous, ...	32	3	29	

Total number of examinations made, 1,797.

QUARTERLY REPORT UPON THE DISTRIBUTION OF BIOLOGICAL PRODUCTS AND DIAGNOSTIC OUTFITS.

The following gives the total number of biological products and diagnostic outfits distributed by the State Department of Health during the three months ending Sept. 30, 1917: —

Biological Products.

Diphtheria antitoxin: —	
12,000 units (special for the Boston City Hospital),	1,048 bottles.
6,000 units (special for the Boston City Hospital),	24 bottles.
3,000 units,	8,364 bottles.
2,000 units (special for the Boston City Hospital),	96 bottles
1,500 units,	1,740 bottles.
750 units,	1,202 bottles.
Smallpox vaccine: —	
Capillary tubes,	83,371
Bulk,	3,500
Typhoid vaccine: —	
Vials,	5,111
Bulk,	9,400
Typhoid-Paratyphoid vaccine: —	
Vials,	2,057
Bulk,	4,800
Paratyphoid vaccine: —	
Vials,	825
Bulk,	350
Antimeningitis serum,	520 bottles.
Silver nitrate solution,	11,184 ampoules.

Diagnostic Outfits.

Culture tubes,	2,790
Sputum bottles,	1,362
Pneumonia outfits,	12
Widal outfits,	970
Typhoid culture outfits,	386
Malaria-Gonorrhœa outfits,	164

ANTHRAX IN MASSACHUSETTS FOR CURRENT YEAR.

The following table indicates that cases of anthrax have been increasingly prevalent since the beginning of the present war: —

1908,	8	1913,	8
1909,	7	1914,	8
1910,	7	1915,	11
1911,	6	1916,	31
1912,	11	1917 (9 months),	39

The demand for leather has compelled the manufacturer to secure hides from new areas in foreign territory, with regard to which our knowledge as to the prevalence of diseases is meagre. This increase of anthrax has been coincident with the shipping of hides from these newer sources.

During the first nine months of the present year, 6 of the 39 cases reported have been fatal. There was 1 case of pulmonary anthrax; the remainder were external. The pulmonary case and 34 of the others were infected through the handling of hides, 3 from the handling of hair, and 1 from the handling of wool.

English investigators have reported recently finding cases of anthrax simulating cases of cerebrospinal meningitis, the diagnosis of anthrax not being established until anthrax bacilli had been demonstrated in the spinal fluid.

Since anthrax cannot be accurately diagnosed except through bacteriological findings, smears have been urged in all cases, with the following results: —

	Cases.
Smears positive,	24
Diagnosis made at autopsy,	1
Smears negative,	8
No laboratory examination,	6
	39

Of the 8 negative smears, 4 were isolated cases, each being the only case in the locality, and each handled hides which were not associated with other cases of the disease. The 4 remaining negative smears, in cases 4, 17, 29 and 35, occurred in association with other cases in fellow workmen who had positive smears, and thus diagnosis was undoubtedly correct.

Of the 6 cases from which no smear was taken, several were associated with positive cases, suggesting that no error was made in the diagnosis. To illustrate: cases 20, 22 and 24 all handled the same lot of hides. A smear from case 24 was positive, also case 6 was a fellow workman with case 16, the latter case being confirmed by a smear.

Thus the diagnosis was confirmed bacteriologically in 25 cases (including 1 where the diagnosis was made at autopsy) and was undoubtedly correct in 7 other cases, — a total of 32 certain cases.

When a stevedore or longshoreman was the first case reported, the manufacturer to whom the hides handled were consigned and the board of health of the town to which the shipment was being forwarded were notified of the probable infection of the hides in question.

For prevention of infection the United States Bureau of Animal Industry recommends that hides be immersed for not less than forty-eight hours in a 1 to 1,000 solution of bichloride of mercury, or immersion in a 10 per cent. salt solution containing not less than 2 per cent. hydrochloric acid for forty-eight hours.

For hair disinfection, in a recent report of the Local Government Board (new series, No. 112) it states "that for steam disinfection to be successful, the cases or bales should be opened, the bundles removed and most of the strings cut, unless the temperature inside the steam disinfecting apparatus is maintained at 230° F. for half an hour."

Anthrax in Massachusetts, January to September, 1917, inclusive.

Case No.	OCCUPATION.	Site of Lesion.	Source of Infection.	Source of Material.	Remarks. Treatment.
1	Hide handler, beamhouse,	Neck,	Hides,	Brazil (Minas City),	Treated at hospital. Anthrax bacilli were found in culture and smear. Pustule excised. Serum given in two doses, 20 c. c. and 25 c. c. Case recovered.
2	Hide trimmer, beamhouse,	Nose,	Hides,	India (Amritzar); Venezuela.	Treated at hospital. Serum given, dose 60 c. c. Anthrax bacilli found in smear. Case recovered.
3	Stevedore at wharf,	Neck,	Hides,	Argentine,	Treated at hospital. Anthrax bacilli found in smear. Rest and supportive treatment. Case recovered.
4	Hide handler, beamhouse,	Forehead,	Hides,	Argentine,	Treated at hospital. Rest and supportive treatment. Anthrax bacilli not found in smear. Case recovered.
5	Wool sorter,	Neck,	Wool,	Mexico,	Treated at home. Anthrax bacilli found in smear and from animal inoculation. Case fatal.
6	Hide handler, beamhouse,	– –	Hides,	Argentine or Tennessee, U. S.	Treated at hospital. Case recovered.
7	Foreman, brush factory,	Chin,	Hair,	China,	Treated at hospital. Anthrax bacilli found in smear and from animal inoculation. Lesion excised. Case fatal.
8	Freight handler, railroad freight yard,	Jaw,	Hides,	Unknown,	Treated at hospital. Anthrax bacilli found in smear and from animal inoculation. Case recovered.
9	Freight handler,	– –	Hides,	– – –	Treated at hospital. Anthrax bacilli found in smear. Case recovered.

Anthrax in Massachusetts, January to September, 1917, inclusive — Continued.

Case No.	OCCUPATION.	Site of Lesion.	Source of Infection.	Source of Material.	Remarks. Treatment.
10	Hide handler, beamhouse,	Forearm,	Hides,	China (Hankow),	Treated at home. Case recovered. Anthrax bacilli found in smear.
11	Hide handler, beamhouse,	Chin,	Hides,	China (Hankow),	Case recovered. Treated at home. Anthrax bacilli found in smear.
12	Hide handler, beamhouse,	Ankle,	Hides,	China (Hankow),	Case recovered. Treated at home. Anthrax bacilli found in smear.
13	Hide handler, beamhouse,	Shoulder,	Hides,	China (Hankow); India (Dacca).	Treated at hospital. Anthrax bacilli found in smear. Case recovered.
14	Hide handler, beamhouse,	Finger,	Hides,	Argentine,	Treated at home. Case recovered. Anthrax bacilli not found in smear.
15	Hide trimmer, beamhouse,	Neck,	Hides,	China; India,	Treated at hospital. Pustule cauterized. Anthrax bacilli found in smear. Case recovered.
16	Lime handler, beamhouse,	Eyelid,	Hides,	Argentine; Tennessee,	Treated at hospital. Anthrax bacilli found in smear. Case recovered.
17	Splitting machine operator,	Neck,	Hides,	China (Hankow); India (Angra).	Case recovered. Anthrax bacilli not found in smear. Staphylococci found in smear.
18	Lime handler, beamhouse,	Neck,	Hides,	China (Hankow),	Treated at hospital. Case fatal. Anthrax bacilli found in pathological specimen.
19	Hide handler, beamhouse,	Neck,	Hides,	China (Hankow),	Treated at hospital. Case recovered. Anthrax bacilli found in smear.

20	Hide handler, beamhouse,	Cheek,	Hides,	China,	Treated at home. Case recovered.
21	Freight handler on wharf,	Neck,	Hides,	India (Calcutta),	Treated at hospital. Case fatal. Anthrax bacilli found in smear and from animal inoculation.
22	Splitting machine operator,	Cheek,	Hides,	China,	Case recovered.
23	Railroad freight conductor,	Neck,	Unknown,	Unknown,	Treated at hospital. Smear was negative for anthrax bacilli. Pustule excised. Serum given. Case recovered.
24	Carried hides,	Neck,	Hides,	China,	Treated at hospital. Pustule excised. Case fatal. Anthrax bacilli found in smear.
25	Sorter,	Forearm,	Hair,	China,	Treated at hospital. 50 c. c. serum given. Anthrax bacilli found in smear and from animal inoculation. Case recovered.
26	Beamhouse,	Chin,	Hides,	China (Shanghai) (Hankow).	Treated at hospital. Case recovered.
27	Beamhouse,	On back,	Hides,	China; Argentine,	Treated at hospital. Lesion excised. Case recovered.
28	Brush worker,	Cheek,	Hair,	China,	Treated at hospital. Case recovered. Anthrax bacilli found in smear.
29	Shipper,	Arm,	Hides,	China (Hankow),	Treated at hospital. Anthrax bacilli not found in smear. Case recovered.
30	Railroad freight handler,	Neck,	Hides,	India,	Treated at hospital. Anthrax bacilli found in smear. Case recovered.
31	Weigher,	Internal anthrax (pulmonary).	Hides,	India (Calcutta),	Treated at hospital. Anthrax bacilli found at autopsy. Case fatal.

Anthrax in Massachusetts, January to September, 1917, inclusive — Concluded.

Case No.	OCCUPATION.	Site of Lesion.	Source of Infection.	Source of Material.	Remarks. Treatment.
32	Embosser,	Arm,	Leather,	China,	No anthrax bacilli found in smear. Lesion curretted and cauterized. 45 c. c. serum given. Case recovered.
33	Freight handler at wharf,	Neck,	Hides,	Argentine,	Treated at hospital. Anthrax bacilli found in smear. Case recovered.
34	Railroad freight handler,	Forearm,	Hides,	Argentine,	Treated at home. Anthrax bacilli not found in smear. Case recovered.
35	Beamhouse,	Neck,	Hides,	China (Hankow),	Treated at hospital. Case recovered.
36	Beamhouse,	Neck,	Hides,	China (Hankow),	Treated at hospital. Case recovered. Anthrax bacilli found in smear.
37	Hide trimmer, beamhouse,	Head,	Hides,	China (Hankow),	Treated at hospital. Case critical. Anthrax bacilli found in smear.
38	Beamhouse,	Arm,	Hides,	China (Hankow),	Treated at hospital. Case recovered. Anthrax bacilli found in smear.
39	Beamhouse,	Cheek,	Hides,	China (Hankow),	Treated at hospital. Case recovered. Smear and animal inoculation negative for anthrax bacilli.

RÉSUMÉ OF COMMUNICABLE DISEASE FOR SEPTEMBER, 1917.

There were 3,008 cases of communicable disease reported during September. This represents a decrease as compared with the preceding month, where 3,171 cases were reported, and with September, 1916, where cases reported numbered 3,147. This apparent decrease is misleading, however, as regards the more common communicable diseases, since in September, 1916, 623 cases of poliomyelitis were reported, while in the same month this year but 16 cases were reported.

Scarlet fever, measles and especially diphtheria showed increased prevalence. This increase in diphtheria emphasizes the necessity for early medical attention in all suspicious cases of sore throat, the prompt administration of antitoxin for treatment, and for the immunization of non-immunes who have been in contact with the disease.

Anthrax. — A total of 6 cases, each engaged in handling hides, was reported from four communities. Details will be found in the summary "Anthrax in Massachusetts for the Current Year," Nos. 33 to 38 inclusive of these cases, published in this issue.

Epidemic of Cerebrospinal Meningitis. — Nine cases were reported for the month, as compared with 19 cases in August.

Lobar Pneumonia. — For five months lobar pneumonia has been included in the list of reportable diseases. During this time 854 cases have been reported, distributed as follows: May, 360; June, 277; July, 80; August, 57; September, 80.

Poliomyelitis. — Cases were less prevalent in September than in August, the figures for the two months being 16 and 39 respectively.

Smallpox. — One case of smallpox was reported from Winchendon. The source of infection was not determined.

Typhoid fever. — There were 263 cases of typhoid fever reported, a decrease of 106 cases as compared with September, 1916.

Typhoid Carriers. — During September two typhoid carriers were found.

The first carrier had typhoid fever in April of this year, and typhoid bacilli were found in the feces in September, when the carrier's father became ill with the disease.

The second carrier conducted a small boarding house. Since August, 1916, five of the boarders apparently have received their infection from this source. The carrier denied ever having had typhoid fever. Widal test was atypical; typhoid bacilli were found in the feces.

Diseases on the Premises of Milk Handlers. — There were four such instances during September. Three cases of typhoid were reported, one being a driver on a milk route, two being residents on dairy farms. In the fourth instance diphtheria was reported. There was no spread of the disease from these cases.

Typhoid Fever at the State Infirmary at Tewksbury. — An outbreak of typhoid fever, explosive in character, occurred at the State Infirmary in Tewksbury the latter part of September. The cases were practically confined to nurses and attendants, who took their meals in two dining rooms, all of the food coming through the first dining room. The investigation, though not yet completed, would indicate that the infection was introduced by contact either with a chronic carrier or case which was so mild that the nature of it was not recognized. The chef was one of the earlier cases, and was about his work for some time before suspicions were aroused as to the nature of his illness.

One of the waitresses, who gave no history of ever having had typhoid fever, showed a strong atypical Widal, characteristic of many carriers.

One of the nurses, suffering from a profuse diarrhœa, kept about her work for a space of two weeks before reporting that she was ill.

This experience again strikingly calls attention to the importance of thoroughly immunizing all institution employees against typhoid, even though it may meet with some opposition.

Typhoid Fever in Gardner. — The outbreak of 54 cases, reported in detail in the previous Bulletin, extended into September, when 9 additional cases occurred. Six of these were due to contact infection.

Diphtheria in Malden. — The prompt taking of cultures in two schoolrooms from one of which two cases of diphtheria were reported undoubtedly prevented a school outbreak of the disease. In one room 3 of the 50 cultures taken proved positive, while in the second room 6 out of 62 cultures were positive.

Diphtheria in Erving. — A small outbreak of 12 cases occurred in Erving; 10 of the cases were in the same school; cultures taken from 142 pupils were negative.

Diphtheria in Melrose. — There were 20 cases of diphtheria reported during August, and when the schools opened cases of the disease increased, 21 being reported in September. The prompt taking of cultures by school physicians disclosed several carriers, some being nasal carriers.

Dysentery. — During the latter half of September 57 cases of bacillary dysentery were reported from the Medfield State Hospital. Only two employees were affected. The disease apparently originated among the inmates.

RARE DISEASES.

Actinomycosis was reported from Boston, 1.

Anterior poliomyelitis was reported from Cambridge, 1; Fall River, 2; Greenfield, 1; Haverhill, 3; Lowell, 1; Malden, 1; Merrimac, 1; Quincy, 1; Reading, 1; Revere, 1; Somerville, 2, and Whitman, 1.

Anthrax was reported from Berlin, 1; Hudson, 1; Peabody, 1; Winchester, 1, and Woburn, 2.

Cerebrospinal meningitis was reported from Boston, 1; Brookline, 1; Cambridge, 1; Chelsea, 1; Lynn, 1; Lowell, 2; Northampton, 1, and Salem, 1.

Dog bite was reported from Canton, 1, and West Boylston, 1.

Dysentery was reported from Boston, 1; Braintree, 1; Acushnet, 1; Greenfield, 2; Lawrence, 6; Medfield, 57, and Westborough, 5.

Hookworm was reported from Boston, 1.

Malaria was reported from Boston, 4; Brookline, 1; Dedham, 2; Haverhill, 2; Newton, 2, and Worcester, 1.

Pellagra was reported from Boston, 1; Tewksbury, 1, and Northampton, 1.

Septic sore throat was reported from Ayer, 1; Dedham, 1; Haverhill, 1; Lowell, 1; Lynn, 1; New Bedford, 1; Warwick, 1; Webster, 1, and Wendell, 2.

Smallpox was reported from Winchendon, 1.

Trachoma was reported from Boston, 1; Lawrence, 2; Malden, 1, and Worcester, 1.

DISTRIBUTION.

All Communicable Diseases.

	August, 1917.	September, 1917.	September, 1916.
Total cases,	3,171[1]	3,008	3,147
Case rate per 100,000 population,	82.4[1]	78.2	83.4

Certain Prevalent Diseases.

	August, 1917.	September, 1917.	September, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[2]
Diphtheria: —				Everett, (7) 16 Lynn, (11) 21 Malden, (9) 21 Melrose, (3) 21 Fitchburg, (8) 14 Gardner, (1) 40 Springfield, (7) 36 Erving, (0) 12
Total cases,	590	729	463	
Case rate per 100,000 population,	15.3	19.0	12.3	
Measles: —				
Total cases,	380	241	181	Westfield, (1) 41
Case rate per 100,000 population,	9.9	6.3	4.8	
Scarlet fever: —				
Total cases,	145	248	201	
Case rate per 100,000 population,	3.8	6.4	5.3	
Typhoid fever: —				
Total cases,	247	264	369	Fall River, (20) 52 Gardner, (3) 9
Case rate per 100,000 population,	6.4	6.9	9.8	
Whooping cough: —				
Total cases,	338	261	277	
Case rate per 100,000 population,	8.8	6.8	7.3	
Tuberculosis, pulmonary: —				
Total cases,	702[2]	636	622	
Case rate per 100,000 population,	18.3[2]	16.5	16.5	
Tuberculosis, other forms: —				
Total cases,	67	57	57	
Case rate per 100,000 population,	1.7	1.5	1.5	

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[1] Certain diseases have been revoked since the August Bulletin was issued.

[2] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

INTERSTATE RECIPROCAL NOTIFICATION IN SEPTEMBER.

Disease and Locality of Notification.	Health Authority referred to —	Why Referred.
Typhoid fever; Abington,	Connecticut State Department of Health, September 1.	Patient came from 9 Poquonnok Road, Groton, Conn., to Abington, August 3; onset Aug. 12 in Abington, Mass.
Typhoid fever; Lynn,	New Hampshire State Board of Health, September 17.	Patient had been on farm in Piermont, N. H., five weeks previous to onset; taken sick there and taken to Union Hospital, Lynn, Mass.
Typhoid fever; Watertown,	Maine State Department of Health, September 17.	Patient at South Harpswell, Me., from July 21 to August 3; ? of polluted well on property; onset on August 8 in Watertown, Mass.
Typhoid fever; Greenfield,	State Department of Health, Virginia, September 17.	Patient in Groseclose, Va., during month of July; onset of disease was five days after returning to Greenfield.
Typhoid fever; Ayer,	Massachusetts State Department of Health by Rhode Island State Board of Health, September 19.	Plumber at Camp Devens, Ayer, until Friday, September 14; went from Ayer to North Providence, R. I.; ill on arriving in North Providence, R. I., September 14.
Typhoid fever; Springfield,	State Department of Health of Maine, September 19.	Patient visited at Long Island, Me., from August 1 to 15; onset of disease August 21 in Springfield, Mass.
Typhoid fever; Springfield,	State Department of Health of New York, September 19.	Patient visited at Ossining and Rye Beach from August 20–27; onset of disease September 4 in Springfield, Mass.
Typhoid fever; Berlin, N. H.	Massachusetts State Department of Health by New Hampshire State Board of Health, September 24.	Patient came to Berlin, N. H., from Fitchburg, Mass., on August 14; onset August 29, and died September 14.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	Occupation.	Locality.	Sex.	Age.	Color.
Amyl acetate,	Shoemaker,	Jamaica Plain,	F	16	W
Anthrax,	Freight handler,	Peabody,	M	47	W
Anthrax,	Wool sorter,	Lawrence,	M	53	W
Anthrax,	Beamer,	Winchester,	M	28	W
Anthrax,	Beamer,	Hudson,	M	21	W
Anthrax,	Tanner,	Hudson,	M	53	W
Anthrax,	Tanner,	Woburn,	M	47	W
Anthrax,	Beamer,	Winchester,	M	–	–
Caisson,	Tunnel worker,	South Boston,	M	43	C
Lead poisoning,	Wagon manufacture,	South Boston,	M	53	W
Lead poisoning,	Tin can manufacture,	South Boston,	M	25	W
Lead poisoning,	Foundry molder,	South Boston,	M	41	W
Lead poisoning,	Foundry,	South Boston,	M	26	W
Lead poisoning,	Foundry,	South Boston,	M	–	–
Lead poisoning,	Painter,	South Boston,	M	18	W
Lead poisoning,	Painter,	Dorchester,	M	38	W
Lead poisoning,	Painter,	Medford,	M	38	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts, ...	3,849,006	39	**7**	74	–	590	**51**	54	–	57	**60**	380	**19**
2	Cities over 200,000.													
3	Boston, ...	778,500	1	–	18	–	208	**18**	5	–	9	**17**	127	**8**
4	Cities, 150,000-200,000.													
5	Worcester, ...	170,077	1	–	–	–	16	**1**	–	–	12	**8**	14	–
6	Cities, 100,000-150,000.	*570,968*	*2*	–	*8*	–	*88*	*9*	*6*	–	*10*	*4*	*49*	*5*
7	Fall River, ...	127,218	1	–	4	–	22	**3**	–	–	3	**2**	12	**1**
8	New Bedford, ...	115,272	–	–	1	–	10	**1**	–	–	1	–	25	**3**
9	Cambridge, ...	110,582	–	–	1	–	18	–	3	–	3	**1**	8	–
10	Springfield, ...	109,174	–	–	1	–	29	**4**	3	–	2	–	4	**1**
11	Lowell, ...	108,722	1	–	1	–	9	**1**	–	–	1	**1**	–	–
12	Cities, 50,000-100,000.	*511,498*	*24*	*3*	*9*	–	*59*	*5*	*9*	–	*4*	*9*	*58*	*3*
13	Lynn, ...	98,659	2	**1**	–	–	14	**2**	1	–	–	**2**	8	–
14	Lawrence, ...	92,187	–	–	–	–	6	–	–	–	1	**3**	–	–
15	Somerville, ...	91,102	–	–	3	–	6	**1**	1	–	–	–	6	–
16	Brockton, ...	64,668	2	–	2	–	5	–	2	–	–	–	5	–
17	Holyoke, ...	62,179	–	–	–	–	4	**1**	–	–	2	**3**	27	**3**
18	Haverhill, ...	51,806	20	**2**	4	–	13	–	2	–	–	–	3	–
19	Malden, ...	50,897	–	–	–	–	11	**1**	3	–	1	**1**	9	–
20	Cities and Towns, 25,000-50,000.	*498,330*	–	*2*	*14*	–	*49*	*5*	*8*	–	*9*	*6*	*49*	*3*
21	Chelsea, ...	48,273	–	**1**	3	–	6	**3**	1	–	1	–	3	–
22	Newton, ...	44,573	–	–	–	–	5	**1**	–	–	–	–	4	–
23	Quincy, ...	44,221	–	–	5	–	7	–	–	–	–	–	7	–
24	Pittsfield, ...	42,913	–	–	–	–	2	**1**	1	–	–	–	6	**1**
25	Fitchburg, ...	40,464	–	–	–	–	3	–	–	–	3	**1**	5	**1**
26	Salem, ...	39,872	–	**1**	1	–	5	–	–	–	2	–	9	–
27	Everett, ...	39,588	–	–	4	–	7	–	–	–	1	**1**	5	–
28	Taunton, ...	37,001	–	–	–	–	2	–	–	–	–	**2**	–	–
29	Brookline, ...	36,007	–	–	–	–	–	–	2	–	–	–	6	–
30	Medford, ...	33,758	–	–	1	–	1	–	1	–	–	**1**	–	–
31	Chicopee, ...	32,230	–	–	–	–	4	–	–	–	–	**1**	–	–
32	Waltham, ...	31,179	–	–	–	–	3	–	3	–	1	–	4	**1**
33	Revere, ...	28,251	–	–	–	–	4	–	–	–	1	–	–	–
34	Cities and Towns, 10,000-25,000.	*569,407*	*5*	–	*16*	–	*103*	*7*	*15*	–	*7*	*10*	*38*	–
35	Beverly, ...	24,863	–	–	4	–	1	–	–	–	1	–	–	–
36	Gloucester, ...	24,513	–	–	–	–	1	**1**	–	–	–	**2**	–	–
37	Northampton, ...	22,636	1	–	1	–	–	–	–	–	–	–	3	–
38	North Adams, ...	22,042	–	–	–	–	–	–	–	–	–	–	3	–
39	Peabody, ...	19,908	–	–	–	–	1	–	–	–	-	**1**	1	–
40	Attleboro, ...	19,480	–	–	–	–	–	**1**	–	–	–	–	–	–
41	Westfield, ...	19,456	–	–	3	–	2	–	5	–	2	**1**	9	–
42	Watertown, ...	18,123	–	–	–	–	4	–	–	–	–	–	1	–
43	Leominster, ...	17,675	–	–	–	–	3	–	–	–	–	–	–	–
44	Melrose, ...	17,394	–	–	–	–	20	–	–	–	–	–	–	–
45	Framingham, ...	17,146	–	–	–	–	1	–	1	–	–	–	1	–
46	Gardner, ...	17,116	–	–	1	–	33	**3**	–	–	–	–	1	–
47	Woburn, ...	16,896	–	–	–	–	2	–	–	–	–	**1**	1	–
48	Arlington, ...	16,524	–	–	–	–	2	–	–	–	–	–	2	–
49	Marlborough, ...	15,546	1	–	–	–	1	–	–	–	–	–	–	–
50	Newburyport, ...	15,470	–	–	–	–	–	–	–	–	–	–	1	–
51	Methuen, ...	15,137	–	–	–	–	1	–	–	–	–	**1**	1	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and correc-

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19C		38A		7		28-29		30-35		1		8		61A		14		4		100		
Mumps.		Ophthalmia Neonatorum.		Scarlet Fever.		Tuberculosis, Pulmonary.		Tuberculosis, Other Forms.		Typhoid Fever.		Whooping Cough.		Cerebrospinal Meningitis.		Dysentery.		Malaria		Septic Sore Throat.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
123	–	209	–	145	4	703	336	67	69	246	17	338	26	19	15	48	19	13	–	36	2	1
																						2
22	–	95	–	38	2	225	82	15	15	29	2	128	11	5	5	39	1	2	–	6	–	3
																						4
3	–	10	–	13	–	33	20	3	7	13	2	4	–	–	–	–	1	–	–	–	–	5
10	–	*45*	–	*32*	–	*133*	*51*	*18*	*7*	*68*	*6*	*55*	*6*	*6*	*4*	*2*	*4*	*1*	–	–	–	6
4	–	16	–	3	–	32	8	4	1	35	3	31	1	1	1	2	2	–	–	–	–	7
1	–	14	–	9	–	32	7	5	2	16	1	5	4	2	1	–	1	–	–	–	–	8
1	–	10	–	4	–	29	22	5	1	8	1	11	–	–	–	–	–	1	–	–	–	9
4	–	2	–	16	–	29	5	3	2	4	1	7	1	1	1	–	1	–	–	–	–	10
–	–	3	–	–	–	11	9	1	1	5	–	1	–	2	1	–	–	–	–	–	–	11
14	–	*21*	–	*9*	–	*79*	*36*	*15*	*11*	*15*	*1*	*41*	–	*3*	*2*	–	*2*	–	–	–	–	12
2	–	2	–	2	–	15	10	3	2	5	–	9	–	1	–	–	1	–	–	–	–	13
1	–	3	–	1	–	14	11	5	5	2	1	2	–	1	2	–	1	–	–	–	–	14
1	–	3	–	3	–	11	2	1	–	2	–	4	–	1	–	–	–	–	–	–	–	15
7	–	8	–	1	–	13	–	3	1	1	–	25	–	–	–	–	–	–	–	–	–	16
–	–	1	–	1	–	13	7	–	1	–	–	–	–	–	–	–	–	–	–	–	–	17
–	–	2	–	–	–	8	4	2	–	3	–	1	–	–	–	–	–	–	–	–	–	18
3	–	2	–	1	–	5	2	1	2	2	–	–	–	–	–	–	–	–	–	–	–	19
21	–	*19*	–	*18*	–	*71*	*35*	*9*	*9*	*23*	*2*	*34*	*2*	*1*	*2*	*1*	*1*	*1*	–	*1*	–	20
2	–	5	–	2	–	6	4	–	1	6	–	7	–	–	1	–	–	–	–	–	–	21
6	–	–	–	1	–	2	3	1	1	2	–	3	–	–	–	1	–	–	–	1	–	22
1	–	6	–	2	–	8	1	2	–	3	–	–	–	–	–	–	–	–	–	–	–	23
–	–	2	–	7	–	10	3	–	–	1	1	14	–	1	–	–	–	–	–	–	–	24
2	–	–	–	1	–	7	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	25
1	–	–	–	–	–	10	5	1	–	1	–	4	2	–	–	–	–	–	–	–	–	26
1	–	2	–	3	–	8	2	2	3	2	–	–	–	–	1	–	–	–	–	–	–	27
–	–	–	–	–	–	7	5	–	4	2	–	–	–	–	–	–	–	–	–	–	–	28
2	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–	–	–	29
1	–	1	–	–	–	1	2	–	–	2	–	–	–	–	–	–	–	–	–	–	–	30
–	–	2	–	1	–	4	8	1	–	1	–	–	–	–	–	–	1	–	–	–	–	31
5	–	–	–	1	–	3	1	–	–	2	1	6	–	–	–	–	–	–	–	–	–	32
–	–	1	–	–	–	5	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	33
23	–	*10*	–	*22*	–	*74*	*33*	*2*	*6*	*72*	*3*	*32*	*3*	*3*	*2*	*6*	*5*	*7*	–	*26*	*1*	34
–	–	1	–	–	–	1	–	–	–	–	–	2	1	–	–	–	–	–	–	–	–	35
–	–	–	–	–	–	1	2	–	–	1	–	–	–	2	2	–	–	–	–	–	–	36
1	–	–	–	3	–	9	4	–	–	1	–	–	–	–	–	–	–	1	–	–	–	37
–	–	–	–	–	–	5	1	–	–	–	–	2	–	–	–	–	–	–	–	–	1	38
–	–	1	–	–	–	3	–	–	–	–	–	1	–	1	–	1	2	–	–	–	–	39
–	–	–	–	–	–	2	1	–	–	–	–	4	–	–	–	–	1	–	–	–	–	40
1	–	–	–	7	–	6	4	–	–	1	–	–	–	–	–	–	–	–	–	–	–	41
–	–	–	–	1	–	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	42
–	–	1	–	–	–	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	43
–	–	–	–	1	–	1	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	44
–	–	1	–	–	–	11	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	45
–	–	–	–	2	–	–	1	1	–	56	2	–	–	–	–	–	–	–	–	–	–	46
–	–	–	–	–	–	3	4	–	2	1	–	–	–	–	–	–	–	–	–	–	–	47
–	–	–	–	1	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	48
1	–	1	–	1	–	5	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	49
1	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	50
–	–	–	–	–	–	1	1	–	–	3	–	1	–	–	–	–	–	–	–	–	–	51

tion, the deaths given above, while approximately correct, are not absolutely complete.

Cases and Deaths from Diseases Dangerous

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,930	–	–	–	–	4	–	–	–	–	–	–	–
53	Weymouth,	14,444	–	–	–	–	2	1	–	–	–	–	–	–
54	Milford,	13,962	–	–	–	–	–	–	–	–	–	–	–	–
55	Winthrop,	13,918	–	–	1	–	–	–	5	–	–	–	1	–
56	Greenfield,	13,590	–	–	4	–	–	–	–	–	–	–	–	–
57	Wakefield,	13,389	–	–	–	–	1	–	–	–	–	–	1	–
58	Adams,	13,302	–	–	–	–	–	1	–	–	–	–	1	–
59	Plymouth,	13,273	–	–	–	–	1	–	–	–	–	–	–	–
60	Clinton,	13,243	–	–	–	–	1	–	1	–	–	–	–	–
61	Webster,	13,031	–	–	–	–	1	–	–	–	–	–	–	–
62	Norwood,	12,286	–	–	–	–	–	–	–	–	1	**1**	–	–
63	West Springfield,	12,273	–	–	–	–	2	–	–	–	–	–	–	–
64	Danvers,	11,955	–	–	2	–	–	–	–	–	1	**1**	–	–
65	Dedham,	11,820	–	–	–	–	3	–	–	–	–	–	1	–
66	Natick,	11,673	2	–	–	–	2	–	–	–	2	**2**	–	–
67	Saugus,	11,189	1	–	–	–	4	–	–	–	–	–	–	–
68	Easthampton,	10,430	–	–	–	–	4	–	–	–	–	–	7	–
69	Athol,	10,333	–	–	–	–	3	–	–	–	–	–	3	–
70	Winchester,	10,312	–	–	–	–	1	–	3	–	–	–	–	–
71	Bridgewater,	10,129	–	–	–	–	2	–	–	–	–	–	–	–
72	TOWNS, 5,000–10,000.	*355,823*	*5*	*1*	*6*	–	*39*	*4*	*4*	–	*5*	*3*	*20*	–
73	TOWNS, 2,500–5,000.	*181,232*	–	–	*1*	–	*14*	*2*	*4*	–	*1*	*3*	*11*	–
74	TOWNS UNDER 2,500.	*213,171*	*1*	*1*	*2*	–	*14*	–	*3*	–	–	–	*14*	–
75	STATE INFIRMARY.	–	–	–	–	–	–	–	–	–	–	–	–	–

In addition to the above there occurred 2 cases of anthrax, 1 in Beverly and 1 in Boston; 3 cases of
at the Tewksbury State Infirmary; 4 cases of pellagra, 1 in Boston, 1 in Danvers, 1 in Peabody and 1
8 cases of tetanus, 1 in Brockton, 1 in Dennis, 1 in Peabody, 1 in New Bedford, 2 in Springfield, 1 in
Brockton, 1 in Lynn, 1 in Peabody and 2 in Worcester; 1 case of trichinosis in Boston.

TO THE PUBLIC HEALTH — *Concluded.*

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28-29 Tuberculosis, Pulmonary.		30-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough		61A Cerebrospinal Meningitis.		14 Dysentery.		4 Malaria.		100 Septic Sore Throat.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	52
–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	53
1	–	–	–	–	–	–	–	–	1	–	–	4	–	–	–	–	1	1	–	–	–	54
5	–	–	–	–	–	1	–	–	–	2	–	10	–	–	–	–	–	–	–	–	–	55
10	–	–	–	2	–	–	–	–	–	1	–	–	–	–	–	5	–	–	–	–	–	56
–	–	–	–	–	–	2	1	–	–	3	–	–	–	–	–	–	–	–	–	–	–	57
–	–	–	–	–	–	3	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	58
–	–	–	–	–	–	1	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	59
–	–	–	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	60
–	–	3	–	–	–	2	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	61
–	–	–	–	1	–	–	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	62
–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	63
–	–	–	–	–	–	–	1	–	–	–	–	1	–	–	–	–	–	1	–	–	–	64
–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	–	–	–	65
1	–	1	–	–	–	3	1	–	–	–	–	1	–	–	–	–	–	–	–	26	–	66
–	–	–	–	1	–	–	1	–	–	–	.	–	–	–	–	–	–	–	–	–	–	67
–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	68
1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	69
1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	70
–	–	–	–	–	–	–	1	–	1	1	1	1	–	–	–	–	–	–	–	–	–	71
18	–	*7*	–	*8*	–	*36*	*25*	*3*	*8*	*8*	–	*20*	*2*	*1*	–	–	*3*	–	–	*2*	*1*	72
4	–	–	–	*2*	–	*23*	*11*	–	*3*	*8*	*1*	*7*	*2*	–	–	–	*2*	*2*	–	–	–	73
8	–	*1*	–	*3*	–	*10*	*30*	*2*	*3*	*7*	–	*17*	–	–	–	–	–	–	–	*1*	–	74
–	–	*1*	–	–	2	*19*	13	–	–	*3*	–	–	–	–	–	–	–	–	–	–	–	75

dog bite (requiring antirabic treatment), 1 in Chelsea, 1 in Lowell and 1 in Waltham; 1 case of glanders
in Tewksbury, with 3 deaths, 1 in Boston, 1 in Foxborough and 1 in Peabody; 1 case of smallpox in Ware;
Westfield and 1 in Winchester, with 1 death in New Bedford; 10 cases of trachoma, 5 in Boston, 1 in

LABORATORY AIDS FOR DIAGNOSIS AND TREATMENT OF COMMUNICABLE DISEASES.

The State Department of Health maintains, as a part of its regular work, bacteriological and biological laboratories to aid in the control and prevention of communicable diseases. The facilities of these laboratories and certain supplies furnished by them are available to physicians for the free use of residents of the Commonwealth. Upon requisition these supplies are sent to local boards of health, from whom physicians may obtain them as required.

The following supplies are available: —

Diphtheria antitoxin, 3 sizes: 3,000, 1,500 and 750 units.
Antityphoid vaccine (3 ampoules in each set).
Smallpox vaccine.
Antimeningitis serum.
Antirabic treatment (secured by special arrangement in each case through District Health Officers).
Outfits for diphtheria cultures.
Outfits for Widal tests (typhoid fever).
Outfits for culture tests (typhoid fever).
Schick tests for determining diphtheria immunity (material on application to District Health Officers).
Outfits for prevention of ophthalmia (silver nitrate in wax ampoules).
Outfits for sputum.

The following examinations are made for diagnosis at the laboratories, the specimens being sent to the laboratories by the physicians in attendance: —

At Bacteriological Laboratory, Room 527, State House: —

Culture test for typhoid, blood (of value only in first five days).
Widal test for typhoid, blood (rarely positive before fifth day).
Culture test for typhoid, stools, urine (probable carrier cases chiefly).
Sputum for tubercle bacilli (consumption).
Pus smears for gonococci.
Blood smears for malaria.
Throat and nose cultures for diphtheria.

At Wassermann Laboratory, Harvard Medical School, Longwood Avenue, Boston, Wassermann test for syphilis: —

Specimens are received in Wassermann Laboratory when submitted by direction of the District Health Officers or local boards of health. Samples of blood are taken at the laboratory on Tuesdays and Thursdays from 3 to 5 P.M. There is no charge for this class of work.

In addition to the above work examinations are made for rabies, glanders and anthrax for the Department of Animal Industry. Specimens to receive attention must be submitted through direction of the Department of Animal Industry.

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

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Division of Administration,	Acting Director, Lyman A. Jones, M.D.
Division of Sanitary Engineering,	Director and Chief Engineer, X. H. Goodnough, C.E.
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Division of Water and Sewage Laboratories,	Director and Chemist, H. W. Clark.
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Division of Food and Drugs,	Director and Analyst, Hermann C. Lythgoe.
Division of Hygiene,	Director, Lyman A. Jones, M.D.

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The Southeastern District,	Adam S. MacKnight, M.D., Fall River.
The Eastern District,	Merrill E. Champion, M.D., Wollaston.
The Northeastern District,	Arthur A. Brown, M.D., Swampscott.
The North Midland District,	Charles E. Simpson, M.D., Lowell.
The South Midland District,	William W. Walcott, M.D., Natick.[1] George T. O'Donnell, M.D., Waltham.[2]
The Wachusett District,	Francis A. Finnegan, M.D., Ayer.
The Connecticut Valley District,	John S. Hitchcock, M.D., Northampton.
The Berkshire District,	Howard A. Streeter, M D . Pittsfield.

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[1] Leave of absence, military service.

[2] Temporary Health Officer.

PUBLIC HEALTH BULLETIN

ISSUED MONTHLY

BY THE

STATE DEPARTMENT OF HEALTH

OF MASSACHUSETTS

NOVEMBER, 1917

Vol. 4, No. 11

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass., under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

RÉSUMÉ OF THE PRESENT STATUS OF MEDICAL SUPERVISION OF SCHOOL CHILDREN IN MASSACHUSETTS.

THE importance of child hygiene has long been recognized in Massachusetts by the few, as illustrated by the report of the commission appointed by the Governor of the Commonwealth in 1849 to make a sanitary survey of the State. Their report, made the following year, contains these specific recommendations: —

> XVIII. We recommend that, in erecting schoolhouses, churches and other public buildings, health should be regarded in their site, structure, heating apparatus and ventilation.
>
> XXVI. We recommend that measures be taken to ascertain the amount of sickness suffered among the scholars who attend the public schools and other seminaries of learning in the Commonwealth.

In 1875 and following years Dr. Henry P. Bowditch of Boston made elaborate studies of the physical growth of school children in Boston, which appear in the annual reports of the State Board of Health for 1877 and 1879.

The first systematic work in the line of school hygiene in Massachusetts was inaugurated in Boston in 1894 by Dr. Durgin, chairman of the Boston Board of Health, under the term "medical inspection of schools." An effort to control an outbreak of diphtheria was the immediate occasion for the beginning of this work.

Brookline began similar work the same year. Work was begun in Marblehead in 1895, while in Beverly, Cambridge and Gloucester work was inaugurated in the following year.

Interest in medical inspection gradually increased, the work being taken up in a community here and there until 1906, when the Legislature passed a bill requiring school inspection to be carried on throughout the State.

This bill, chapter 502, Acts of 1906, reads as follows: —

AN ACT RELATIVE TO THE APPOINTMENT OF SCHOOL PHYSICIANS.

Be it enacted, etc., as follows:

SECTION 1. The school committee of every city and town in the Commonwealth shall appoint one or more school physicians, shall assign one to each public school within its city or town, and shall provide them with all proper facilities for the performance of their duties as prescribed in this act; *provided,* *however*, that in cities wherein the board of health is already maintaining or shall hereafter maintain substantially such medical inspection as this act requires, the board of health shall appoint and assign the school physician.

Section 2. Every school physician shall make a prompt examination and diagnosis of all children referred to him as hereinafter provided, and such further examination of teachers, janitors and school buildings as in his opinion the protection of the health of the pupils may require.

Section 3. The school committee shall cause to be referred to a school physician for examination and diagnosis every child returning to school without a certificate from the board of health after absence on account of illness or from unknown cause; and every child in the schools under its jurisdiction who shows signs of being in ill health or of suffering from infectious or contagious disease, unless he is at once excluded from school by the teacher; except that in the case of schools in remote and isolated situations the school committee may make such other arrangements as may best carry out the purposes of this act.

Section 4. The school committee shall cause notice of the disease or defects, if any, from which any child is found to be suffering to be sent to his parent or guardian. Whenever a child shows symptoms of smallpox, scarlet fever, measles, chickenpox, tuberculosis, diphtheria or influenza, tonsilitis, whooping cough, mumps, scabies or trachoma, he shall be sent home immediately, or as soon as safe and proper conveyance can be found, and the board of health shall at once be notified.

Section 5. The school committee of every city and town shall cause every child in the public schools to be separately and carefully tested and examined at least once in every school year to ascertain whether he is suffering from defective sight or hearing or from any other disability or defect tending to prevent his receiving the full benefit of his school work, or requiring a modification of the school work in order to prevent injury to the child or to secure the best educational results. The tests of sight and hearing shall be made by teachers. The committee shall cause notice of any defect or disability requiring treatment to be sent to the parent or guardian of the child, and shall require a physical record of each child to be kept in such form as the state board of education shall prescribe.

Section 6. The state board of health shall prescribe the directions for tests of sight and hearing and the state board of education shall, after consultation with the state board of health, prescribe and furnish to school committees suitable rules of instruction, test-cards, blanks, record books and other useful appliances for carrying out the purposes of this act, and shall provide for pupils in the normal schools instruction and practice in the best methods of testing the sight and hearing of children. The state board of education may expend during the year nineteen hundred and six a sum not greater than fifteen hundred dollars, and annually thereafter a sum not greater than five hundred dollars for the purpose of supplying the material required by this act.

Section 7. The expenses which a city or town may incur by virtue of the authority herein vested in the school committee or board of health, as the case may be, shall not exceed the amount appropriated for that purpose in cities by the city council and in towns by a town meeting. The appropriation shall precede any expenditure or any indebtedness which may be incurred under this act, and the sum appropriated shall be deemed a sufficient appropriation in the municipality where it is made. Such appropriation need not specify to what section of the act it shall apply, and may be voted as a total appropriation to be applied in carrying out the purposes of the act.

Section 8. This act shall take effect on the first day of September in the year nineteen hundred and six. [*Approved June 20, 1906.*

Unfortunately, it was provided that no city or town should expend, under this bill, sums in excess of the amount previously appropriated therefor. Since many localities failed to make any appropriation for this purpose, no inspection was established. This section was repealed in 1908.

Subsequently school inspection was inaugurated quite generally, so that it is now carried out to some extent in nearly every city and town in the Commonwealth.

With the spread of this work and the increasing amount of attention devoted to it the term "medical inspection" has come to be regarded as too narrow, since many other things are included in conserving the health of school children beside sickness; hence the term "school hygiene," as comprehending all things which influence the health and consequently the welfare and efficiency of the pupil, has come into use.

It will be observed that under this law the matter of school hygiene is placed in the hands of the school authorities except in instances where the local board of health was already maintaining or should hereafter maintain the work required under the act, in which case the health authorities should continue in charge.

School hygiene work is carried on by the board of health in 18 (?) cities and in some half dozen towns. Elsewhere it is in the hands of the school authorities.

Without attempting to discuss the question whether school hygiene is logically a function of school or health authorities, since it is the established policy of the State to place it in the hands of the former, one grave disadvantage of this policy may be pointed out. School authorities may not spend their funds except for work in *public schools*. Consequently, in all towns and in some cities *private and parochial schools* are automatically excluded from the benefits of medical supervision. In private schools this exclusion does not so much matter because, being conducted for profit, healthful conditions and the health of the pupils are usually well cared for. Parochial schools, often drawing their pupils from the homes of foreign-speaking people and those newly come to this country, especially need the assistance derived from well-organized medical supervision. The schools themselves are attempting to meet this situation, but from lack of funds are unable to undertake the work in the manner they desire, or to employ sufficient workers to carry on the follow-up work in the home, — a necessary adjunct in any efficient system of medical supervision of school children.

During the years 1915 and 1916 the State District Health Officers conducted a personal inquiry into the present status of medical supervision in the public schools in the various cities and towns throughout the State.

Though information is lacking from a few communities, and individual questions were unanswered in others, the information summarized in the following pages is sufficiently complete to indicate with reasonable accuracy the character of the medical supervision as now carried out in the Commonwealth.

NUMBER OF SCHOOL CHILDREN.

There are enrolled in the public schools of Massachusetts 604,023 pupils,[1] with an average attendance of about 508,000. The attendance in individual cities and towns varies from 100,300 in Boston to 10 in the town of Mount Washington.

47 communities have less than 100 pupils.
56 communities have from 100 to 199 pupils.
104 communities have from 200 to 499 pupils.
49 communities have from 500 to 999 pupils.
44 communities have from 1,000 to 1,999 pupils.
31 communities have from 2,000 to 4,999 pupils.
22 cities have over 5,000 pupils.

From the foregoing it is evident that 207 towns have fewer than 500 pupils in the public schools, while there are less than 1,000 pupils in 256 towns. In 44 towns there are between 1,000 and 2,000 pupils, with school children in excess of 2,000 in 53 cities and towns.

This pronounced variation in the number of pupils in itself suggests the wide range of problems to be encountered in carrying out any standard plan for school hygiene work. This is more evident if one considers the variety of territory involved, — the densely settled city and the scattered population of the rural sections and inaccessible hill towns, away from transportation lines.

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[1] Figures from the 1915–16 annual report of the Board of Education. Town of Millville not set off at time of above report.

NUMBER OF SCHOOL PHYSICIANS, AND BASIS FOR THEIR SELECTION.

In the great majority of towns there is but one school physician. In many towns, of course, there is but one resident practitioner, who is naturally chosen to act as school physician. In some towns there is no resident physician, and under such circumstances the most accessible physician in an adjoining town is likely to be selected.

Where there are two or more physicians the selection is influenced by various considerations. Sometimes there are but two physicians in a town, and the work is apportioned between them. Occasionally a town is made up of several villages, and a physician resident in the respective communities does the work. Outside of those cities where the apportionments are made on a civil service basis there is practically no serious consideration of the qualifications of the man appointed to act as school physician, save that the appointee must have had "medical experiénce."

In a few instances it is required that the school physician must have had previous experience as a member of a board of health or as a school physician, or that he must have had hospital training in children's diseases, or that he must have interest in child life and development.

NUMBER OF SCHOOL PHYSICIANS EMPLOYED.	Cities and Towns.	Total.
1,	245	245
2,	46	92
3,	16	48
4,	11	44
5,	3	15
6,	1	6
8,	2	16
11,	4	44
13,	2	26
42,	1	42
	353[1]	578

---

[1] This total includes 22 cities and towns concerning which information is lacking. At the time of this compilation Millville had not been set apart from Blackstone.

NUMBER OF PUPILS UNDER CARE OF THE PHYSICIAN.

The number of school physicians employed seems to be determined without reference to the number of pupils, since a single physician has under his care from 10 to 7,000 pupils. The great diversity in this regard is shown by the following table: —

NUMBER OF PHYSICIANS.	Pupils per Physician.
2,	22 to 7,000
3,	33 to 2,433
4,	240 to 2,650
5,	340 to 1,400
8,	1,644 to 2,038
11,	254 to 1,454
13,	1,029 to 1,280
42,[1]	2,680

[1] Boston.

COMPENSATION OF PHYSICIANS.

The school physician in Massachusetts is very generally a part-time official, as will appear later. Consequently, while the salary paid school physicians varies greatly, in scarcely an instance, except in the case of a supervisor of a department, is it sufficient to provide more than a small part of the physician's living.

This is an unfortunate situation, since it tends to lessen interest in the work and means practically that school work will be neglected or slighted at times when other duties more largely concerned with securing a livelihood are pressing; and save in those instances where a school physician becomes especially interested it does not lead the physician to study and perfect himself in this particular branch of preventive medicine.

SALARIES PAID.	Cities and Towns.
Nothing,	7
To $10, inclusive,	11
To $20, inclusive,	24
To $30, inclusive,	57
To $50, inclusive,	73
To $100, inclusive,	50
To $200, inclusive,	40
To $300, inclusive,	22
To $500, inclusive,	13
Over $500,	8
By number of cases,	8
Information lacking,	40
	353

From the foregoing table it appears that in 215 communities the school physician's salary does not exceed $100 per year, in the majority of instances much less, while 7 towns pay nothing. Sixty-two communities pay in excess of $200, but not to exceed $300. Salaries above this amount are few.

The wide difference in amounts paid school physicians is also shown in a tabulation giving the amount paid the physician per pupil. As might be expected, the average amounts are higher in communities with few pupils, where the time spent in travel is greater.

	Minimum.	Maximum.	Average.
Less than 100 pupils,	–	$1 00	$0 380
100 to 199,	–	1 35	250
200 to 499,	–	40	176
500 to 999,	$0 050	52	187
1,000 to 1,999,	–	45	180 +
2,000 to 4,999,	060	24	140
5,000 and over,	030	53	155
Boston,	205 [1]	–	–

[1] Approximately.

TIME SPENT BY SCHOOL PHYSICIANS.

Information available as to the time spent by school physicians in the schools is exceedingly difficult to analyze because of the great variety of expression employed in stating the amount of time spent and the use of indefinite terms.

For the sake of comparison many of the terms used have been somewhat arbitrarily reduced to hours per year, as appears in the following table: —

TIME SPENT.	Cities and Towns.
600 hours annually,	8
200 to 400 hours annually,	10
120 hours annually,	1
40 to 80 hours,	49
30 hours,	3
24 hours,	6
15 hours,	17
9 hours,	3
6 hours,	5
3 hours,	9
2 hours,	1
Much time,	9
Very little time,	17
One examination annually and subject to call,	67
Information lacking,	148
	353

For the remaining 138 communities information is wholly indefinite or lacking. It is evident that in the great majority of places for which information is at hand the amount of time devoted to school work is not more than one to two hours per week, and in many of these much less. While, of course, in country schools, where the number of pupils is few, this amount of time may suffice for reasonably careful work, it does not permit of thorough school hygiene work in larger places unless the number of pupils under the care of the individual physician is small. Attention has already been called to the fact, however, that in the large majority of places there is but one school physician, and to the considerable number of pupils under the care of a single physician.

CHARACTER OF THE EXAMINATION.

As might be expected from preceding statements the character of the examination given the school pupil varies. From the information gathered it is apparent that much of the supervision is of the nature of inspection rather than an examination of the pupil, and the thoroughness of this inspection undoubtedly varies with the conscientiousness and ability of the individual school physician, the number of pupils under his care and the amount of time spent in his work.

In general, inspection seems to include the skin (for skin diseases and pediculosis), the nose and throat (for tonsils and adenoids), and perhaps the teeth, though they are infrequently mentioned. The general condition is noted.

In 93 communities it is stated that there is an examination of the pupil. This includes 43 instances where the examination is limited to those scholars whose appearance suggests the desirability for special inquiry. The special examinations seem to include the heart and lungs, though this is usually through the clothing, or at least through the underclothing.

In some instances the explanation is given that owing to the lack of a suitable place in which to conduct it, a careful examination cannot be made.

In general, such inspections or examinations are made annually. In some half dozen instances they are said to be repeated two or more times during the year. In many places, aside from the annual examination, such as it may be, the school physician is subject to call at any time when his presence is deemed necessary by the teacher.

CHARACTER OF EXAMINATION.	Cities and Towns.
Inspection only,	123
Superficial examination (probably inspection),	33
Examination (probably inspection at time of outbreak),	5
Examination, at least of special cases,	93
Examination (vague); physician called when necessary,	34
Information incomplete or lacking,	65
	353

SUPERVISION OF SCHOOL PHYSICIANS.

SUPERVISION.	Cities and Towns.
By school authorities,	92
By board of health,	15
Little or no supervision,	210
Information lacking,	36
	353

Naturally, in communities where school hygiene work is carried on by the board of health, supervision of the work of the school physician is in the hands of that board, though in only 15 places is such specifically stated to be the case.

In 92 communities all supervision is left to the school authorities. There is reason to believe that in many cases this supervision, so far as it is exercised, rests in the hands of the superintendent of schools, who will often be better informed regarding the subject of school hygiene than the various school committees.

In 210 communities there is little or no supervision. From the preceding statements it is evident that in the great majority of places there is no real supervision of the work of the school physician.

THE SCHOOL NURSE.

NUMBER OF NURSES EMPLOYED.	Full Time.	Part Time.[1]	Cities and Towns.
38,	38	–	1
4,	4	–	1
3,	9	–	3
2,	6	–	3
1,	19	33	52
Total,	76	33	60

[1] This table is undoubtedly incomplete, since public health nurses are being more numerously employed, and especially in smaller communities school work constitutes a part of their duties.

As shown in the above tabulation 60 communities (including 20 cities) employ school nurses either on a full-time or part-time basis. In the 33 places where a nurse is employed on part time she gives a certain amount of time regularly, or else does work occasionally, as emergencies or other special work require.

In some cities appointments of nurses are made through the civil service. In other places they are supplied from some hospital or by private interests, the Visiting Nurse Association, etc., either without expense to the community or the expense divided between the two.

In the majority of instances they must be graduate nurses with experience or training in district nursing or some form of welfare work. Occasionally previous experience in school work is required.

In general, the salaries paid nurses, so far as information is available, are from $600 to $900 per year. In a few instances they are below or above these sums. In the former they are probably for part time or are supplemented from private sources, while salaries above $900 may be given to head or supervising nurses. In the majority of cases the salary is from $700 to $800 per year.

The Nurse — Follow-up Work.

In rather more than half of the communities where nurses are employed (34) follow-up work is carried out. In 7 the work was but newly started, and details were not fully determined. In the remaining places information on this subject is lacking.

So far as specified the home work had to do with skin diseases, pediculosis, teeth, accompanying pupils to hospitals, dispensaries or physicians, seeing that glasses were secured, etc.

Supervision of School Nurse.

The work of the nurses is largely under the supervision of the school authorities as represented by the school superintendent and the school physician, except in those instances where the school hygiene work is in charge of the local board of health.

In 11 communities out of 60 where nurses are employed they are under the supervision of the health authorities; in 39, under that of the school authorities; in 5 there is said to be little or no supervision; while information is lacking from 4 places.

Ordinarily the work of the school nurse would and does receive closer observation than that of the school physician, since she is more or less directly under the latter's observation, and is more apt to submit regular and frequent reports concerning the work she has done.

Co-operation between School Physicians, School Nurses and Boards of Health.

Co-operation.	Cities and Towns.
Excellent or good co-operation,	167
Little co-operation,	34
No co-operation,	60
Information lacking,	92
	353

In 167 communities the co-operation between school physicians and nurses and the boards of health is said to be excellent or good. It may be limited more particularly to co-operation in the presence of communicable disease, or it may be assured because the school physician is a member or agent of the local board of health, as is stated to be the case in 62 instances.

In general, so far as defined, co-operation consists in the reporting of cases of suspicious communicable disease to the local board of health, which then makes necessary investigation; the reporting of all cases of communicable disease to the school authorities by the local board of health (required by law); the fumigation of schoolrooms; the taking of cultures, etc.

In 92 instances there is said to be no co-operation. It is only fair to point out that in this list are many small places where there is lack of co-operation, not so much from unwillingness as from probable lack of occasion to call it forth.

While school physicians and nurses are undoubtedly working conscientiously and accomplishing much good, it is clear that the results are far short of what might be accomplished were there more adequate supervision of their work, especially some form of central supervision. With adequate supervision their work might be made more uniform, thus securing better results and making possible comparative studies, enabling a more accurate judgment as to the value and efficiency of methods and work accomplished.

RECORDS KEPT BY SCHOOL PHYSICIANS.

RECORDS KEPT.	Cities and Towns.
None, ...	96
No permanent records; scanty records, ...	84
Information indefinite or lacking, ...	88
Fairly complete (cards, books, sheets), ...	85
	353

In 180 communities no records are kept by school physicians, or else the records are scanty and not permanent, the physicians merely keeping a few rough notes, jottings for annual reports, enough to enable them to make out their bills, etc.

In 85 communities more or less complete individual records are made for permanent school use. These are largely on cards or sheets which accompany the pupil from room to room during his attendance at school. Even in these records there is undoubtedly considerable variation in character, depending upon the form of blank, attitude and skill of the school physician, etc.

Records kept by School Nurse.

In 31 places individual records are kept by the school nurses, chiefly on cards or sheets. Such records consist of a list of pupils visited, conditions found, and of work accomplished. In many instances a weekly report is submitted to the authorities. In two places a partial record only is kept. In the remaining 29 out of 60 communities where nurses are employed information is lacking or no records (14) are kept.

In many places excellent work is being accomplished by both school physicians and nurses. It is unfortunate, however, that in so many communities the records are incomplete or that no records are kept, since under these circumstances it is impossible to know accurately what the situation is in a given community, and it is utterly impossible to compare the efficiency of work done in one place with that carried on elsewhere.

There should be a uniform type or form of record for general use, with ample space for such further comment as individual or local conditions may make desirable.

What has just been said applies also in considerable measure to the annual published reports of school physicians and nurses which, as far as they are published, are included in the annual reports of school committees and school superintendents. In far too many instances such reports are merely a statistical summary of defects found, number of visits made, etc., with nothing to show what has actually been accomplished in the way of correction of defects, prevention of sickness and improvement of the general health.

Specific Appropriations for Medical Inspection in Schools.

Information concerning appropriations for school health work, gathered during this inquiry, would seem to offer further evidence of the lack of appreciation of the value and importance of this work. The following is a tabulation of the information obtained: —

APPROPRIATIONS.	Cities and Towns.
$25 or less,	40
$26 to $50,	55
$51 to $100,	29
$101 to $500,	40
$501 to $1,000,	7
$1,001 and over,	15
No appropriation,	113
Information lacking,	54
	353

The showing is somewhat better if the tabulation is based on a statement of sums spent for "promotion of health," taken from the 1915 annual report of the State Board of Education, as follows: —

EXPENDITURES.	Cities and Towns.
$25 or less,	68
$26 to $50,	72
$51 to $100,	51
$101 to $500,	75
$501 to $1,000,	15
$1,001 and over,	29
Information lacking,	43
	353

In the great majority of instances the amount corresponds approximately to the amount paid physicians and nurses. That the value of school health work gains increasing recognition, however, is evidenced by the statement that 74 cities and towns have increased their expenditures for this purpose, some of them very substantially, since the work was inaugurated.

In nine instances mention is made of increased appropriation to provide for school nurses. In one instance money was added to secure a school dentist. One hundred and seventy-four communities reported that there had been no change in the amount of their appropriations, while 11 communities had decreased their original appropriations. The information on this point was lacking or indefinite in 94 instances.

Forty-four cities and towns reported special expenditures, not included in the regular appropriations. Under this head were included items for printing, supplies, vaccination, lectures, operations for adenoids, services of oculist, fumigation, dental expenses and other miscellaneous items.

EXAMINATION OF VISION AND HEARING.

The provisions of the law requiring teachers to examine pupils for vision and hearing are very generally carried out, as appears from the following summary: —

	Cities and Towns.
Teachers carry out tests,	323
Physician or school nurse carries out test,	5
Nothing done, or information lacking,	25
	353

In general, so far as the reports show, the State test cards and accompanying instructions are used in testing the vision. Hearing is tested with the watch. In some instances the school nurse, and occasionally the school physician, assists in making the tests.

Records of tests for vision and hearing are kept in many places, as shown below, while in many others information is lacking.

RECORDS.	Cities and Towns.
Records kept, State form and cards,	30
Records kept, forms only,	19
Records kept, cards only,	45
Records kept, character not specified,	90
No records kept,	10
Information lacking,	159
	353

When defects of vision or hearing occur parents are more or less generally notified, though in but very few instances does there appear to be any follow-up work to see that defects are corrected.

DEFECTS REPORTED.	Cities and Towns.
Defects reported to parents by teacher,	185
Defects reported to parents by school physician,	18
Defects reported to school physician,	24
Defects reported to school superintendent,	4
Defects followed up by school nurse,	9
Defects, nothing done,	11
Information lacking,	102
	353

Does the Teacher take the Initiative in detecting Cases to be referred to Physician or Nurse?

From information available it is shown that in 296 cities and towns it is left with the teachers to take the initiative in determining what cases are to be referred to the school physician or nurse. In the remaining communities the matter receives no attention from the teacher, or information is lacking. That the matter should be left to the teacher is not surprising, perhaps, if one recalls for a moment the small pay of school physicians, the small amount of time devoted by them to school work, and the comparatively few school nurses employed. Under these circumstances it is pertinent to note the showing of the following table, which indicates that in a considerable number of communities no effort whatever is made to inform the teachers as to suspicious or suggestive symptoms of communicable disease or remediable defects, while information at hand makes it plain that much of the instruction given in other communities is casual, given incidentally at the time of the physician's visit or on the appearance of an epidemic, rather than systematic instruction given strictly from the *preventive* standpoint.

	Cities and Towns.
Teachers instructed by school physician,	92
Teachers instructed by school superintendent,	5
Teachers instructed by school nurse,	5
Teachers instructed by pamphlets, etc. (State Board of Education; State Department of Health, etc.),	18
No definite instructions,	38
No instruction,	112
Information lacking,	83
	353

School Luncheons.

School luncheons have yet to become general. Only 85 communities provide anything in this line. A few communities attempted school lunches, but for one reason or another the effort was unsuccessful. In many places where a lunch is provided the matter is limited to the high school.

The lunches are sometimes provided by private interests, and are very frequently subject to charges for the articles sold. Sometimes they are prepared by classes in domestic science or under the direction of the teacher of cooking.

	Cities and Towns.
Lunches in high school only,	46
Lunches in other schools,	39
Lunches attempted but given up,	8
Lunches under consideration,	4
No lunches,	197
Information lacking,	59
	353

OPEN-AIR SCHOOLS.

The subject of open-air schoolrooms has received but little practical consideration throughout the State. In 9 cities and towns such rooms have been established, and 3 additional communities have such rooms in preparation.

In most of these places admission to such schoolrooms is based upon the recommendations of the school physician or nurse, and applies more particularly to "pretubercular" children. From 39 communities information is lacking.

SCHOOL GARDENS.

The value of school and home gardens is much more widely recognized. In some instances where the school authorities have not been active, private interests, such as the woman's club or grange, have encouraged the garden work. In places where home gardens have been established a supervisor has often been employed to further the work.

	Cities and Towns.
School authorities interested,	122
Private authorities interested,	13
No interest,	169
Information lacking,	49
	353

INSPECTION OF SCHOOL BUILDINGS.

Information concerning the inspection of school buildings, whether by school physicians, school committees, school superintendents, boards of health or District Police, is more or less indefinite and somewhat conflicting. It is evident that where school buildings are inspected the matter is more frequently left to the school physician than to any one else, and that in his case the inspection is an annual affair, or, more likely, a casual inspection, made in passing at the time of a visit to the school. In a few instances it is said that there are two or more inspections each year.

Apparently there are few records of such inspections, since there is no mention of records of any sort save in 51 communities. Even in these places the record is apt to cover only any defects noticed, or may consist merely of personal notes.

INSPECTION BY —	Cities and Towns.
School physicians,	164
District Police,	16
Health Department,	5
School superintendent,	26
School committee,	28
Miscellaneous,	21
No inspection,	62
Information lacking,	31
	353

In 42 cities and towns studies of illumination and ventilation have been made by school superintendents, school committees, pupils, and, in a few instances, by an architect or the building inspectors of the District Police.

There is nothing available to show how elaborate these studies were, or whether any alterations or improvements followed in consequence of them.

Thermometers are very generally found in schoolrooms, as appears in the following summary: —

THERMOMETERS.	Cities and Towns.
In all rooms,	142
In rooms,	144
No thermometers,	8
Information lacking,	59
	353

Considerable attention is evidently given to the subject of protection from fire so far as reports indicate, though there is nothing to indicate how thorough are the precautions taken. The presence of fire escapes in some communities is noted. It should be observed that the great majority of the 96 communities where it is said no precautions are taken are small towns where most of the school buildings are probably isolated, and seldom of more than one story in height.

FIRE PRECAUTION.	Cities and Towns.
Fire drills,	118
Fire drills and fire extinguishers,	43
Fire extinguishers,	16
"Comply with law,"	35
No precautions,	96
Information lacking,	45
	353

TEACHING OF HYGIENE.

	Cities and Towns.
Hygiene taught,	270
Hygiene not taught,	31
Information lacking,	52
	353

While it would seem as if health and hygiene were subjects of sufficient importance to be taught in every school in the Commonwealth, the information gathered shows that there is no instruction on these subjects in no less than 31 communities, while information concerning 51 communities is lacking.

In places where hygiene is a subject of instruction the amount of time devoted to it varies greatly. The following schedule indicates roughly the time so spent: —

TIME DEVOTED WEEKLY TO TEACHING HYGIENE.	Cities and Towns.
3 hours,	1
1½ to 2½ hours,	21
1 hour,	35
¼ to ½ hour,	63
½ to 1 hour,	43
Varies in grades,	19
Taught in upper grades,	3
Taught in lower grades,	1
Taught one term,	4
Taught part of year,	11
Taught but little time,	13
No time,	31
Information lacking,	108
	353

Twenty-two different textbooks are used for the teaching of hygiene as disclosed by information from 265 cities and towns. One textbook, decidedly the most popular, is used in 142 of these communities.

In 24 places the name of the textbook used is not given, and 20 communities state that no textbook is used. From 68 communities information is lacking.

CONCLUSIONS.

The information given in this summary demonstrates beyond question the almost entire absence of uniformity in school hygiene work and the lack of any standard of such work as it is carried out in Massachusetts. The value of this work, however, when conscientiously and thoroughly carried out, is well recognized and established.

At the present time there is nowhere lodged the authority, either in the State Board of Education or in the State Department of Health, to establish standards, even minimum standards, for the carrying on of school hygiene work. The matter is left wholly to the individual boards of health or school committees. Hence, though some communities are doing excellent work, many others are doing the work in a more or less perfunctory manner, failing to achieve the maximum benefits of school hygiene work.

Under such circumstances it becomes an almost hopeless task to secure even a minimum standard of work in school hygiene, or to attempt to secure an approach toward more uniform practice and efficiency.

School hygiene concerns itself with —

1. The location, the housing and the equipment of schools so far as conditions affecting the health of the pupils are concerned.
2. The health, the physical condition, of the pupil himself, including inspection and examination to determine the presence of defects, if any, and the devising of means for their relief.
3. The teaching of hygiene, including especially recent knowledge as to the transmission of communicable diseases, the importance of proper health habits, etc.

To secure maximum efficiency in school hygiene work there should be —

1. Provision for determining the healthfulness of sites and plans for school buildings, and for their subsequent regular inspection.
2. Provision for minimum requirements as to the inspection and examination of school children, and for the supervision of such work.
3. Provision for the extension, by the board of health, as a health measure, of similar inspection and examination to private and parochial schools.

4. Provision for the employment of school nurses in addition to school physicians, in order to increase the efficiency of school work.

5. Provision of means to aid smaller communities in maintaining such school hygiene work as is now made, in aiding them to employ school superintendents.

6. Provision for the prescribing of standards of teaching hygiene in the schools and adequate supervision of the same.

Such measures would make possible much progress in health work in this State, would greatly increase its efficiency, and would eventually repay many times its cost in added health, comfort and productiveness of our people.

REPORTING OF DISEASES BY PHYSICIANS.

FOR the information of physicians and local boards of health who, from their communications to this Department relative to unreported cases of tuberculosis and other diseases, seem to be in doubt on the subject of reporting cases of diseases which in their opinion may have been reported previously by some other physician in accordance with the provisions of sections 49 and 50, chapter 75, Revised Laws, we are printing herewith the following correspondence between this Department and a physician in this State: —

State Department of Health, Boston, Mass.

Gentlemen: — Please send me sections 49 and 50, chapter 75, Revised Laws of Massachusetts.

Does the law direct us doctors to report communicable diseases if we understand some other doctor has seen the case before and was cognizant of the diagnosis?

(Reply.)

Dear Doctor: — I am enclosing herewith a copy of sections 49 and 50, chapter 75, Revised Laws, in their present amended form.

The plain direction of the statute seems to be that every physician shall report all cases of communicable disease that he is called upon to treat. It is perfectly obvious that in some instances this will produce a duplication of reports. However, that is something that the board of health can readily take care of, and we find repeatedly that, because of the assumption that some other doctor has reported, the physician neglects to report. Often this leads to rather serious consequences from an epidemiological standpoint, and more frequently from a financial standpoint to the city or town.

This financial interest of a city or town in a prompt report is based on the provision of the law, that money cannot be paid for reimbursement for non-settled or "State" cases to cities and towns by the State Board of Charity unless the case was properly reported.

By direction of the Commissioner of Health,

Sincerely yours,

EUGENE R. KELLEY,
Director of Division of Communicable Diseases.

(Reply.)

DEAR DOCTOR: — This is well worded. Why don't you send this to all doctors? Some time ago I asked our own board of health the question that brought your above answer, but as they have not answered me, I began to feel I was correct in not reporting a case the second time. I now think you are correct, but am positive very few of us have taken this view.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of October, 1917, samples were collected in 45 cities and towns.

There were 912 samples of milk examined, of which 235 were below the legal standard, 21 samples were skimmed milk not properly labeled, 41 samples contained added water and 5 samples contained dirt.

There were 138 samples of food examined, of which 36 were adulterated. These consisted of 3 samples of oleomargarine which were served for butter, 1 sample of cream below the legal standard, 23 samples of decomposed eggs, 1 sample of fish containing added fish bone, 3 samples of compound lard not properly labeled, 2 samples of sausage containing starch in excess of 2 per cent., 1 sample of shortening containing added water, 1 sample of decomposed shrimp, and 1 sample of beeswax containing paraffin.

There were 151 samples of drugs examined, of which 34 were adulterated. These consisted of 8 samples of camphorated oil, 1 sample of spirit of anise, 24 samples of spirit of nitrous ether, and 1 sample of spirit of peppermint, deficient in the active ingredient.

The police departments submitted 16 samples of poisons and 5 samples of liquor for examination.

There were 26 convictions for violation of the laws, $425.60 in fines being imposed. Nicholas Becrelis of Framingham, on two counts, Matthew J. Bennett of Woburn, Frank Boyd of Essex, on two counts, Frederick H. Fuller of Foxborough, on two counts, Michael Nowak of Oxford, John Machado and Frank Silvia of Dartmouth, Robert A. Rice of Pittsfield, and Adam Robson of Salem were convicted for violation of the milk laws. Frederick H. Fuller of Foxborough and Nicholas Beerelis of Framingham appealed one of their cases. John A. Burke of Milford, Gaspard Lamoureax, Masse's Pharmacy, J. C. Brown, C. A. Collet, Rasaire Demers, Dion's Pharmacy, C. A. Jansen and George Mazel of New Bedford, and Arthur Viens of Nahant, were convicted for violation of the drug laws. Louis F. Langley of Gloucester, on two counts, was convicted for violation of the slaughtering laws. Lewis Rubin of Chelsea, on two counts, was convicted for violation of the cold-storage laws.

There were 14 confiscations made, consisting of 341 pounds of decomposed roosters, 18 dozens of decomposed eggs, 2 pounds of decomposed chicken, 12 pounds of decomposed beef, 12 pounds of decomposed beef hearts, 7 pounds of decomposed beef liver, 20 pounds of decomposed beef tongues, 5 pounds of decomposed frankforts, 43 pounds of decomposed veal, 1 bushel of decomposed clams, 5 pounds of spoiled codfish, one-half pound of spoiled salmon, and 45 dozens of doughnuts which were carried in a dirty receptacle and exposed to dust.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

One sample of skimmed milk not properly labeled, from E. L. Esterbrook of Framingham; 9 samples of milk containing added water, from Thomas Greenwood of Fairhaven; 1 sample of skimmed milk not properly labeled, from Adam Robson of Salem; 1 sample of milk containing added water, from John Machado of Dartmouth; 1 sample of skimmed milk not properly labeled, from Albert H. French of Rockport; 1 sample of milk containing dirt, from Henry H. Wehry of Becket; 2 samples of milk containing dirt, from Jacob F. Kirchner of Becket; 1 sample of milk containing added water and dirt, from Robert A. Rice of Pittsfield; 1 sample of milk containing dirt, from Frank L. Hale of Pittsfield; 1 sample of skimmed milk not properly labeled, from Florence B. Kinsley of Westborough; 1 sample of skimmed milk properly marked below the legal standard and containing added water, from Arthur S. Harris of Fitchburg; and samples of decomposed eggs from the following: 1 each from the Shawmut Egg Company of Boston, C. W. Proctor of Salem, Abraham Azoff of Malden, Max Kroner of Malden, Max Keeperberg of Chelsea, Max Bloom of Revere, Benjamin Sher of Malden, Direct Importing Company of Webster, and Direct Importing Company of New Bedford; 2 each from the New York Baking Company of Chelsea, H. B. Miller of Salem, Swanson Baking Company of Fitchburg, and Max Silver of Worcester; and 4 from J. R. Poole & Co. of Boston.

The licensed cold-storage warehouses report the following amounts of food placed in storage during the month of September, 1917: —

Eggs, case (dozens),	832,470
Eggs, broken out (pounds),	179,314
Butter (pounds),	3,367,935
Poultry (pounds),	456,545
Game (pounds),	2,169
Meat, fresh, and meat products, fresh (pounds),	4,641,280
Fish, fresh food (pounds),	8,088,448½
Total,	17,568,161½

The following was on hand in storage on Oct. 1, 1917: —

Eggs, case (dozens),	15,390,463
Eggs, broken out (pounds),	668,418
Butter (pounds),	20,120,210
Total,	36,179,091

QUARTERLY REPORT ON SLAUGHTERING.

A compilation of the quarterly reports on slaughtering for the quarter ending October 1 shows that during that period 26,672 animals were inspected by the local inspectors of slaughtering throughout the State. Of this number, 5,227 were cattle, 17,150 were calves, 3,368 were hogs, 924 were sheep and 3 were goats. In addition to a number of parts, which were condemned where it was not necessary to condemn the entire carcass, 397 animals were condemned. Of this number, 127 were cattle, 249 were calves, 20 were hogs and 1 was a sheep. There were 195 calves condemned on account of immaturity; 128 animals on account of tuberculosis, of which 108 were cattle, 9 were calves, and 11 were hogs; 32 calves on account of weak condition; 14 animals were either wounded, bruised or injured, of which 5 were cattle, 6 were calves, 2 were hogs and 1 was a sheep. The remaining 28 animals were condemned on account of pneumonia, hog cholera, peritonitis, ulcers of liver, jaundice, abscesses, septicæmia, pyæmia, fever, parturient paresis, emaciation, inspector not present, illegally slaughtered and died otherwise than by slaughter. Of this number, 14 were cattle, 7 were calves and 7 were hogs.

These figures as compared with the figures for the same period in 1916 show a decrease in all the carcasses inspected, amounting to about 550 cattle, about 1,600 calves, about 1,700 hogs and about 1,300 sheep. The number of cattle condemned has increased 15, calves 31, hogs 3, and the number of sheep has decreased 11.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF OCTOBER, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of October, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, . . .	2,040	188	1,334	160	358

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis, ...	339	78	261	
*Typhoid fever (Widal test), . .	175	52	112	11
Typhoid fever (culture test), . .	107	4	103	
Malaria, ...	6	1	5	
Gonorrhœa, ...	139	22	117	
Miscellaneous, ...	24	5	19	

Total number of examinations made, 2,830.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR OCTOBER, 1917.

General Prevalence.

The 4,287 cases of communicable diseases reported during October show a considerable increase over the September total of 3,002 and the October, 1916, total of 3,227 cases. This increase of 1,060 cases over the October, 1916, total is confined chiefly to diphtheria and measles.

There were 1,152 cases of diphtheria reported for the month, an increase of 557 cases over the corresponding month last year. This brings out the seriousness of the diphtheria situation, for the prevalence of the disease has been increasing since early summer in the greater part of the State.

Anthrax. — Eight cases of anthrax were reported during the month, Five persons contracted the infection from five separate lots of China cowhides; 2 from China or India goatskins; and in 1 case the source of infection is unknown.

Diphtheria Carrier. — During the month 4 cases of diphtheria occurred among the pupils of a single schoolroom "somewhere in Massachusetts." Culturing of the pupils in this room disclosed two positive cultures. One was from a pupil who had a very mild attack of the disease, and the other was from a pupil who had not been sick recently, but who had diphtheria in August, 1916. A virulence test and a counter-virulence test, using the diphtheria bacilli from the throat of the latter pupil, showed the organisms to be virulent. Thus a chronic diphtheria carrier was found who had the organisms in his throat fourteen months after having had the disease. The occurrence demonstrates once again the efficacy of conscientious culturing of the throats of school children.

Lobar Pneumonia. — There were 152 cases of this disease reported in October, a marked increase as compared with 80 cases reported in September. Of these 152 cases 23 were reported from Boston, the remaining 129 cases having a State-wide distribution.

Poliomyelitis. — Eleven cases of poliomyelitis were reported from ten widely separated communities.

Typhoid Carrier. — During the month one typhoid carrier was located who was apparently responsible for five cases of typhoid fever this year, and undoubtedly was the source of infection for cases in previous years. The carrier denied ever having had typhoid fever, and has worked for several years on a milk farm. This year the farm on which he worked supplied six families, and typhoid fever cases occurred in four of the families.

Diseases on the Premises of Milk Handlers. — During the month 4 cases of scarlet fever were reported on a farm producing milk that is shipped to Boston. As it was impossible to satisfactorily isolate the case this milk supply was shut off.

EPIDEMICS AND OUTBREAKS.

Diphtheria. — An outbreak of 16 cases was reported from Great Barrington. Investigation showed that practically all attended the school in the Housatonic section of the town.

In North Attleborough 5 cases of diphtheria were reported in September, and an epidemic of 33 cases followed in October, being chiefly confined to one school. This epidemic followed the release of a diphtheria case with only one negative culture. Culturing of the school disclosed three persons with positive throat cultures, one of whom was a teacher. A nurse was employed to aid in the supervision of the cases and to give instructions in quarantining the homes.

An outbreak of 30 cases of diphtheria occurred in Holyoke, and all but 2 were found to attend the same school. Cultures taken from all of the pupils at the school on two successive days were negative, but the third day that cultures were taken four healthy carriers were found, two each in two rooms, and in another building the fifth healthy carrier was found.

Amesbury and West Springfield also had school outbreaks of diphtheria, reporting 21 and 10 cases, respectively.

In Easthampton 12 cases were reported for the month of October. In one family the disease spread after the appearance of the initial case because the parents objected to the giving of immunizing doses of anti-toxin to the children who were not ill. As a result, another case of the disease appeared in this home.

Dysentery. — There were 3 cases of dysentery reported in the Medfield State Hospital during October, making a total of 60 cases for September and October. Institutional dysentery offers an exceptional opportunity for the bacteriological study of this disease if specimens of feces can be obtained early in the course of the disease. Thirty-one of the cases were fatal.

Measles. — In Mattapoisett an outbreak of 35 cases of measles occurred among school children as a result of a child sick with the measles riding to and from school in the same bus as other children before the case was recognized.

Typhoid Fever. — An epidemic of typhoid fever that started in September at the Tewksbury State Infirmary, during which month 23 cases were reported, continued for the first few days of October, 39 more cases making their appearance. The source of infection was not definitely determined, but was without doubt an undetermined healthy or convalescent carrier in the infirmary itself.

RARE DISEASES.

Anterior poliomyelitis was reported from Abington, 1; Chelsea, 1; Danvers, 1; Fall River, 1; Haverhill, 1; Hopedale, 1; Lowell, 1; Springfield, 2; Stoneham, 1; and Wellesley, 1.

Anthrax was reported from Camp Devens, 1; Lynn, 2; Winchester, 1; and Woburn, 4.

Cerebrospinal meningitis was reported from Camp Devens, 1; Boston, 4; Cambridge, 1; Chelsea, 1; Fall River, 1; Holyoke, 1; Malden, 1; and Worcester, 1.

Dog bite was reported from Auburn, 1; Boston, 2; Brockton, 1; Holliston, 2; Lawrence, 1; Lowell, 1; and Newburyport, 1.

Dysentery was reported from Dartmouth, 3; Greenfield, 1; Lawrence, 3; Medfield, 3; New Bedford, 1; and Salem, 1.

Malaria was reported from Boston, 3; Chelsea, 1; Douglas, 1; Marblehead, 1; and Pittsfield, 1.

Pellagra was reported from Boston, 1; Lowell, 1; Tewksbury, 1; and Worcester, 1.

Septic sore throat was reported from Amherst, 1; Boston, 1; Gloucester, 1; Lexington, 4; and Medford, 1.

Tetanus was reported from Pittsfield, 1.

Trachoma was reported from Boston, 5; Cambridge, 1; Fitchburg, 1; and Worcester, 1.

DISTRIBUTION.

All Communicable Diseases.

	September, 1917.	October, 1917.	October, 1916.
Total cases,	3,002[1]	4,292	3,227
Case rate per 100,000 population,	78.0	111.4	85.5

Certain Prevalent Diseases.

	September, 1917.	October, 1917.	October, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[2]
Diphtheria: —				Boston, (190) 309 North Attleborough, (3) 33 Randolph, (1) 14 Amesbury, (0) 21 Chelsea, (7) 24 Danvers, (1) 13 Worcester, (39) 87 Fitchburg, (9) 27 Gardner, (1) 37 Easthampton, (1) 12 Springfield, (22) 61 West Springfield, (1) 10 Erving, (0) 10 Great Barrington, (0) 16
Total cases,	729	1,152	595	
Case rate per 100,000 population,	19.0	29.9	15.8	
Measles: —				Mattapoisett, (0) 35 Salem, (10) 35 Holyoke, (11) 37 Springfield, (7) 36 Westfield, (0) 109
Total cases,	241	589	252	
Case rate per 100,000 population,	6.3	15.3	6.7	
Scarlet fever: —				Northampton, (5) 20 Springfield, (8) 46
Total cases,	248	440	305	
Case rate per 100,000 population,	6.4	11.4	8.1	
Typhoid fever: —				Fall River, (16) 55
Total cases,	264	246	179	
Case rate per 100,000 population,	6.9	6.4	4.7	
Whooping cough: —				
Total cases,	261	236	171	
Case rate per 100,000 population,	6.8	6.1	4.5	
Tuberculosis, pulmonary: —				
Total cases,	635[2]	688	532	
Case rate per 100,000 population,	16.5	17.9	14.1	
Tuberculosis, other forms: —				
Total cases,	57	53	51	
Case rate per 100,000 population,	1.5	1.4	1.4	

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[1] Certain cases of disease have been revoked since the October bulletin was issued.

[2] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

INTERSTATE RECIPROCAL NOTIFICATION IN OCTOBER.

Disease and Locality of Notification.	Health Authority referred to —	Why referred.
Typhoid fever; Adams, . .	State Board of Health, Providence, R. I., on October 9.	Date of onset about August 15. Left work August 25 and visited at Central Falls, R. I., returning to Adams September 1.
Smallpox suspect; Camp Devens, Ayer.	State Department of Health, Augusta, Me. Notified State Dept. of Health of Mass. on October 8.	Soldier exposed in Whitneyville, Me. Went with soldiers to Ayer, October 3. Soldier did not develop smallpox.
Pulmonary tuberculosis; Pittsfield.	State Department of Health, Trenton, N. J., on October 18.	Patient was on his way from Canada to his home in New Jersey.
Typhoid fever; Fall River, .	Medical Officer of Health, Welland, Ont., on October 26.	Patient came home from Canada because of illness. Probably infected at Welland, Ont., where he was employed.
Typhoid fever; Rehoboth, .	State Board of Health, Providence, R. I., on October 27.	Case just across roadway from headwaters of Reserve Pond, which supplies reservoir of Bristol and Warren water supply in Rhode Island.
Typhoid fever; Rehoboth, .	State Board of Health, Providence, R. I., on October 27.	Patient, age nine years. Mother employed at Narragansett Rubber Works, Bristol, R. I.
Typhoid fever; Springfield, .	Department of Health, New Haven, Conn., on October 29.	Case was at Momanguin Beach, New Haven, August 24 to September 2; onset September 9.
Typhoid fever; Springfield, .	State Board of Health, Concord, N. H., on October 30.	Case visited at the Weirs, N. H., July 18 to 27; onset of disease August 31.
Scarlet fever; Pittsfield, . .	State Department of Health, Albany, N. Y., on October 30.	Patient brought to House of Mercy Hospital from Canaan, N. Y., on October 28.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

Disease.	Occupation.	Locality.	Sex.	Age.	Color.
Anthrax, ...	Beamer, ...	Lynn, ...	M	45	W
Anthrax, ...	Hide handler, . .	Woburn, ...	M	59	C
Anthrax, ...	Tanner, ...	Winchester, ...	M	–	W
Anthrax, ...	Laborer, ...	Woburn, ...	M	36	W
Anthrax, ...	–	Woburn, ...	M	65	W
Dermatitis, ...	Machinist, . . .	Boston, ...	M	23	W
Dermatitis, ...	Machinist, . . .	Boston, ...	M	23	W
Dermatitis, ...	Milling, ...	Boston, ...	M	25	W
Dermatitis, ...	Milling, ...	Boston, ...	M	15	W
Lead poisoning, . .	Painter, ...	Boston, ...	M	20	W
Lead poisoning, . .	Painter, ...	Boston, ...	M	58	W
Lead poisoning, . .	Painter, ...	Boston, ...	M	47	W
Lead poisoning, . .	Painter, ...	Boston, ...	M	50	W
Sulphuric acid fumes, .	Foreman, . . .	Worcester, ...	M	21	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92A Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	16	1	73	–	729	61	19	–	80	101	241	8
2	Cities over 200,000.													
3	Boston,	778,500	–	–	18	–	228	14	6	–	13	32	73	4
4	Cities, 150,000–200,000.													
5	Worcester,	170,077	–	–	1	–	24	6	–	–	14	8	2	–
6	Cities, 100,000–150,000.	*570,968*	*4*	–	*8*	–	*114*	*16*	*5*	–	*18*	*16*	*28*	*4*
7	Fall River,	127,218	2	–	1	–	24	6	–	–	3	2	1	–
8	New Bedford,	115,272	–	–	2	–	19	3	–	–	–	3	17	4
9	Cambridge,	110,582	1	–	3	–	22	1	3	–	1	2	6	–
10	Springfield,	109,174	–	–	2	–	36	6	2	–	10	6	3	–
11	Lowell,	108,722	1	–	–	–	13	–	–	–	4	3	1	–
12	Cities, 50,000–100,000.	*511,498*	*6*	*1*	*9*	–	*66*	*5*	*1*	–	*15*	*12*	*18*	–
13	Lynn,	98,659	–	–	2	–	21	1	–	–	1	2	2	–
14	Lawrence,	92,187	–	–	1	–	10	1	–	–	2	2	2	–
15	Somerville,	91,102	2	–	–	–	7	1	1	–	2	–	4	–
16	Brockton,	64,668	–	–	1	–	2	–	–	–	4	2	1	–
17	Holyoke,	62,179	–	–	–	–	3	–	–	–	1	3	4	–
18	Haverhill,	51,806	3	–	5	–	2	–	–	–	2	–	3	–
19	Malden,	50,897	1	1	–	–	21	2	–	–	3	3	2	–
20	Cities and Towns, 25,000–50,000.	*498,330*	*2*	–	*8*	–	*82*	*2*	*2*	–	*11*	*15*	*27*	–
21	Chelsea,	48,273	–	–	2	–	8	–	–	–	3	2	4	–
22	Newton,	44,573	–	–	2	–	4	–	–	–	–	1	–	–
23	Quincy,	44,221	1	–	–	–	5	–	–	–	1	1	2	–
24	Pittsfield,	42,913	–	–	–	–	10	1	–	–	3	3	–	–
25	Fitchburg,	40,464	–	–	–	–	14	1	–	–	1	–	1	–
26	Salem,	39,872	–	–	1	–	4	–	–	–	–	1	10	–
27	Everett,	39,588	–	–	–	–	16	–	–	–	1	1	3	–
28	Taunton,	37,001	–	–	–	–	–	–	–	–	–	1	1	–
29	Brookline,	36,007	–	–	1	–	5	–	1	–	–	–	2	–
30	Medford,	33,758	–	–	–	–	2	–	–	–	1	2	4	–
31	Chicopee,	32,230	–	–	–	–	8	–	–	–	–	–	–	–
32	Waltham,	31,179	–	–	2	–	3	–	1	–	–	2	–	–
33	Revere,	28,251	1	–	–	–	3	–	–	–	1	1	–	–
34	Cities and Towns, 10,000–25,000.	*569,407*	*1*	–	*15*	–	*105*	*9*	*2*	–	*9*	*7*	*48*	–
35	Beverly,	24,863	–	–	–	–	1	–	1	–	1	–	–	–
36	Gloucester,	24,513	–	–	2	–	1	1	–	–	–	1	–	–
37	Northampton,	22,636	–	–	–	–	5	1	–	–	–	1	–	–
38	North Adams,	22,042	–	–	–	–	3	2	–	–	–	1	–	–
39	Peabody,	19,908	–	–	1	–	–	–	–	–	–	–	1	–
40	Attleboro,	19,480	–	–	–	–	6	–	–	–	–	–	1	–
41	Westfield,	19,456	–	–	1	–	1	–	–	–	1	2	41	–
42	Watertown,	18,123	–	–	–	–	1	–	–	–	1	1	–	–
43	Leominster,	17,675	–	–	–	–	1	–	–	–	2	–	–	–
44	Melrose,	17,394	–	–	2	–	21	–	–	–	–	–	1	–
45	Framingham,	17,146	–	–	–	–	–	–	–	–	–	–	–	–
46	Gardner,	17,116	–	–	3	–	40	1	–	–	–	–	–	–
47	Woburn,	16,896	–	–	–	–	1	1	–	–	–	–	–	–
48	Arlington,	16,524	–	–	–	–	–	–	–	–	–	–	–	–
49	Marlborough,	15,546	–	–	–	–	–	–	–	–	–	–	–	–
50	Newburyport,	15,470	–	–	–	–	1	–	–	–	1	–	–	–
51	Methuen,	15,137	–	–	–	–	3	–	–	–	–	–	–	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and

TO THE PUBLIC HEALTH,[1] SEPTEMBER, 1917.

19C		38A		7		28-29		30-35		1		8		61A		14		4		100		
Mumps.		Ophthalmia Neonatorum.		Scarlet Fever.		Tuberculosis, Pulmonary.		Tuberculosis, Other Forms.		Typhoid Fever.		Whooping Cough.		Cerebrospinal Meningitis.		Dysentery.		Malaria.		Septic Sore Throat.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
87	1	170	–	248	2	635	325	57	58	264	28	261	23	8	8	73	16	12	–	10	3	1
																						2
13	–	66	–	31	1	228	88	12	15	32	5	101	11	1	1	1	–	4	–	–	–	3
																						4
1	–	10	–	22	–	26	11	2	5	8	2	2	2	–	–	–	–	1	–	–	–	5
10	–	*41*	–	*47*	–	*97*	*69*	*9*	*9*	*77*	*7*	*39*	*1*	*3*	*3*	–	–	–	–	*2*	*2*	6
2	–	11	–	7	–	21	10	3	3	52	5	7	–	–	–	–	–	–	–	–	–	7
1	–	15	–	18	–	28	15	3	3	9	–	2	–	–	2	–	–	–	–	1	–	8
1	–	8	–	7	–	23	21	1	1	2	1	21	1	1	–	–	–	–	–	–	–	9
6	–	7	–	15	–	14	13	1	1	11	1	9	–	–	–	–	–	–	–	–	–	10
–	–	–	–	–	–	11	10	1	1	3	–	–	–	2	1	–	–	–	–	1	2	11
5	–	*19*	–	*28*	–	*75*	*32*	*7*	*8*	*28*	*6*	*38*	*2*	*1*	*1*	*6*	*2*	*2*	–	*2*	–	12
–	–	2	–	9	–	11	4	1	3	6	4	8	–	1	1	–	–	–	–	1	–	13
1	–	–	–	5	–	22	10	2	–	5	–	1	–	–	–	6	2	–	–	–	–	14
–	–	7	–	6	–	16	5	–	1	5	1	2	–	–	–	–	–	–	–	–	–	15
4	–	4	–	–	–	11	–	3	1	2	–	22	1	–	–	–	–	–	–	–	–	16
–	–	1	–	1	–	3	4	–	1	2	–	–	1	–	–	–	–	–	–	–	–	17
–	–	3	–	4	–	4	6	–	1	5	1	3	–	–	–	–	–	2	–	1	–	18
–	–	2	–	3	–	8	3	1	1	3	–	2	–	–	–	–	–	–	–	–	–	19
13	*1*	*14*	–	*26*	–	*87*	*32*	*12*	*3*	*25*	*2*	*33*	*2*	*2*	*2*	–	*2*	*3*	–	–	–	20
1	–	7	–	1	–	9	2	3	–	11	1	5	–	1	–	–	–	–	–	–	–	21
2	–	1	–	1	–	4	1	–	–	–	–	3	–	–	–	–	–	2	–	–	–	22
–	–	–	–	2	–	17	6	3	–	1	1	–	–	–	–	–	–	–	–	–	–	23
2	–	–	–	8	–	2	2	1	–	–	–	6	–	–	–	–	–	–	–	–	–	24
–	–	2	–	6	–	9	3	1	1	1	–	–	1	–	–	–	1	–	–	–	–	25
1	–	1	–	2	–	10	2	–	1	–	–	9	1	1	1	–	–	–	–	–	–	26
1	–	–	–	1	–	7	–	3	–	5	–	4	–	–	–	–	–	–	–	–	–	27
4	1	1	–	–	–	13	8	–	–	2	–	–	–	–	–	–	–	–	–	–	–	28
2	–	–	–	2	–	6	–	1	–	2	–	–	–	1	–	–	1	1	–	–	–	29
–	–	–	–	2	–	–	1	–	–	2	–	5	–	–	–	–	–	–	–	–	–	30
–	–	–	–	–	–	3	5	–	–	–	–	1	–	–	–	–	–	–	–	–	–	31
–	–	1	–	1	–	1	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	32
–	–	1	–	–	–	6	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	33
31	–	*10*	–	*49*	–	*58*	*24*	*6*	*6*	*50*	*3*	*29*	*1*	*1*	*1*	*2*	*8*	*2*	–	*2*	–	34
2	–	2	–	–	–	9	–	1	–	3	–	2	1	–	–	–	–	–	–	–	–	35
2	–	–	–	2	–	3	1	–	–	8	–	–	–	–	–	–	–	–	–	–	–	36
2	–	–	–	8	–	5	2	1	–	–	–	–	–	1	1	–	1	–	–	–	–	37
–	–	–	–	–	–	1	–	–	–	6	–	–	–	–	–	–	1	–	–	–	–	38
1	–	–	–	–	–	1	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	39
1	–	1	–	1	–	1	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	40
2	–	–	–	7	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41
–	–	1	–	3	–	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	42
–	–	–	–	–	–	4	2	–	1	1	–	–	–	–	–	–	2	–	–	–	–	43
–	–	2	–	5	–	3	–	–	1	–	–	3	–	–	–	–	–	–	–	–	–	44
–	–	–	–	1	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	45
1	–	–	–	1	–	3	1	–	–	9	3	–	–	–	–	–	2	–	–	–	–	46
–	–	–	–	–	–	1	2	–	1	–	–	–	–	–	–	–	–	–	–	–	–	47
–	–	–	–	1	–	–	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	48
1	–	–	–	–	–	3	1	1	2	1	–	6	–	–	–	–	–	–	–	–	–	49
–	–	–	–	2	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	50
–	–	–	–	3	–	4	1	–	–	3	–	–	–	–	–	–	–	–	–	–	–	51

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correction, the deaths given above, while approximately correct, are not absolutely complete.

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	CITIES AND TOWNS GROUPED IN ORDER OF POPULATION.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92A Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge,	14,930	–	–	–	–	–	–	–	–	–	–	–	–
53	Weymouth,	14,444	–	–	–	–	–	–	–	–	–	–	–	–
54	Milford,	13,962	–	–	–	–	1	–	–	–	2	–	–	–
55	Winthrop,	13,918	–	–	–	–	–	–	1	–	1	–	–	–
56	Greenfield,	13,590	1	–	2	–	–	–	–	–	–	–	–	–
57	Wakefield,	13,389	–	–	–	–	1	–	–	–	–	–	–	–
58	Adams,	13,302	–	–	–	–	1	1	–	–	–	–	–	–
59	Plymouth,	13,272	–	–	–	–	1	–	–	–	–	–	–	–
60	Clinton,	13,243	–	–	1	–	–	–	–	–	–	1	–	–
61	Webster,	13,031	–	–	–	–	–	–	–	–	–	–	–	–
62	Norwood,	12,286	–	–	–	–	2	–	–	–	–	–	–	–
63	West Springfield,	12,273	–	–	–	–	6	2	–	–	–	–	–	–
64	Danvers,	11,955	–	–	2	–	1	–	–	–	–	–	–	–
65	Dedham,	11,820	–	–	–	–	–	–	–	–	–	–	1	–
66	Natick,	11,673	–	–	–	–	–	–	–	–	–	–	–	–
67	Saugus,	11,189	–	–	–	–	2	–	–	–	–	–	–	–
68	Easthampton,	10,430	–	–	–	–	3	–	–	–	–	–	2	–
69	Athol,	10,330	–	–	–	–	1	–	–	–	–	–	1	–
70	Winchester,	10,312	–	–	1	–	1	–	–	–	–	–	–	–
71	Bridgewater,	10,129	–	–	–	–	–	–	–	–	–	–	–	–
72	TOWNS, 5,000-10,000.	*355,823*	*2*	–	*7*	–	*61*	*5*	*3*	–	–	*5*	*10*	–
73	TOWNS, 2,500-5,000.	*181,232*	–	–	*5*	–	*20*	*2*	–	–	–	*4*	*3*	–
74	TOWNS UNDER 2,500.	*213,171*	*1*	–	*2*	–	*29*	*2*	–	–	–	*2*	*32*	–
75	STATE INFIRMARY,		–	–	–	–	–	–	–	–	–	–	–	–

In addition to the above there occurred 1 case of actinomycosis in Boston and 1 death in Everett; 6 bite (requiring anti-rabic treatment), 1 in Canton and 1 in West Boylston; 1 case of hookworm disease 1 case and 1 death at the Tewksbury State Infirmary; 1 case of smallpox in Winchendon; and 5 cases

TO THE PUBLIC HEALTH — *Concluded.*

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28-29 Tuberculosis, Pulmonary.		30-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		14 Dysentery.		4 Malaria.		100 Septic Sore Throat		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	52
–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	53
–	–	–	–	3	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	54
2	–	1	–	–	–	2	–	1	–	1	–	1	–	–	–	–	–	–	–	–	–	55
15	–	1	–	2	–	–	–	–	–	1	–	3	–	–	–	2	–	–	–	–	–	56
–	–	–	–	–	–	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	57
–	–	–	–	–	–	–	–	1	–	5	–	–	–	–	–	–	–	–	–	–	–	58
–	–	–	–	1	–	1	–	–	–	–	–	10	–	–	–	–	–	–	–	–	–	59
–	–	–	–	–	–	3	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	60
–	–	1	–	3	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	1	–	61
–	–	–	–	3	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	62
–	–	–	–	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	63
–	–	–	–	1	–	1	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	64
1	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	2	–	1	–	65
–	–	–	–	1	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	66
–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	67
–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	–	–	–	–	68
–	–	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	69
–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	70
1	–	–	–	–	–	1	–	–	–	–	–	2	–	–	–	–	–	–	–	–	–	71
4	–	*7*	–	*24*	–	*31*	*16*	*7*	*4*	*14*	–	*15*	*4*	–	–	*6*	*2*	–	–	–	–	72
1	–	*2*	–	*4*	–	*8*	*11*	–	*2*	*3*	–	*1*	–	–	–	*58*	*1*	–	–	*1*	–	73
9	–	*1*	–	*14*	*1*	*11*	*24*	*1*	*3*	*4*	*2*	*1*	–	–	–	–	*1*	–	–	*3*	*1*	74
–	–	–	–	*3*	–	*14*	*18*	*1*	*3*	*23*	*1*	*2*	–	–	–	–	–	–	–	–	–	75

cases of anthrax, 1 in Berlin, 1 in Hudson, 1 in Peabody, 1 in Winchester and 2 in Woburn; 2 cases of dog in Boston; 3 cases of pellagra with 2 deaths, 1 case and 1 death in Boston, 1 case in Northampton and of trachoma, 1 in Boston, 2 in Lawrence, 1 in Malden and 1 in Worcester.

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State District Health Officers.

The Southeastern District, . . .	Adam S. MacKnight, M.D., Fall River.
The Eastern District, ...	Merrill E. Champion, M.D., Wollaston.
The Northeastern District, . . .	Arthur A. Brown, M.D., Swampscott.
The North Midland District, . . .	Charles E. Simpson, M.D., Lowell.
The South Midland District, . .	William W. Walcott, M.D., Natick.[1] George T. O'Donnell, M.D., Waltham.[2]
The Wachusett District, ...	Francis A. Finnegan, M.D., Ayer.
The Connecticut Valley District, . .	John S. Hitchcock, M.D., Northampton.
The Berkshire District, ...	Howard A. Streeter, M.D., Pittsfield.

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[1] Leave of absence, military service.

[2] At a meeting of the Public Health Council of the State Department of Health on Oct. 30, 1917, it was voted that Dr. George T. O'Donnell be appointed as permanent State District Health Officer.

PUBLIC HEALTH BULLETIN

ISSUED MONTHLY
BY THE
STATE DEPARTMENT OF HEALTH
OF MASSACHUSETTS

DECEMBER, 1917

Vol. 4, No. 12

ALLAN J. McLAUGHLIN, M.D., *Commissioner*

The Common Health of the Commonwealth

Entered as Second-class Matter Oct. 26, 1914, at the Post Office at Boston, Mass., under the Act of Aug. 24, 1912.

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Publication of this Document
approved by the
Supervisor of Administration.

FOOD — WHAT IT IS AND WHAT IT DOES.

CLASSIFICATION OF FOOD.

Include in diet each day food from each group.

1. Protein or Muscle-building Food.	2. Carbohydrate or Heat and Energy-forming Food.	3. Fats and Oils, Heat and Energy yielding.	4. Mineral Matter and Water builds Bone and Teeth and Purifies Blood.	5. Foods Rich in both Protein and Carbohydrates.	6. Foods Rich in both Protein and Fat.
(a) *Animal Kingdom.* Lean meats. Poultry. Fish. Milk. Cheese. Eggs. (b) *Vegetable Kingdom.* Dried peas. Dried beans. Dried lentils. Wheat. Nuts.	(a) *Starches.* Potatoes. Rice. Macaroni. Spaghetti. Hominy. Cereal breakfast foods. Bread. Crackers. Bananas. (b) *Sugars.* Syrups. Honey. Molasses. Jellies. Candies. Most fresh fruits. Dried fruits.	Butter. Cream. Olive oil. Bacon. Salt pork. Oleomargarine. Nut margarine. Peanut butter. Other edible fats and oils.	(a) *Mineral Matter.* Vegetables, especially the green vegetables. Fresh fruits. Milk. Berries. Cereals. (b) *Water.* Water purifies body — regulates body processes.	Milk. Peas. Beans. Bananas. Wheat.	Milk. Nuts. Peanut butter. Cheese. Eggs. Fat meats. Fat fish.

The food problem to-day is a very real one, due to the conditions brought on by the war. Even before the war more food was consumed in Europe than was produced there, and now, with the men in Europe fighting and a large percentage of fertile lands laid waste, the problem is very serious. America has more food than any other country, and if we are to win the war, the United States must share this food with the Allies, must feed her men in the trenches, and also take care of the people at home.

There is enough food if it is distributed wisely. It is possible to do this only when every one understands the real nature of the situation.

It is the home maker who can do the most, for it is she who buys the food and prepares it for the family.

But in order to economize wisely, without endangering the health of her family, she must have a working knowledge of food, and understand fully its function in the body; she must also understand what foods must be conserved, and why.

The body must be kept clean and warm. It must be provided with material to rebuild broken-down tissues and build new tissues; with material to use in forming heat, and nervous and muscular energy; and with material to regulate the body processes. Food performs all this work for the body. It is, generally speaking, divided into four different groups, each of which has its own special function. If the home maker will only make herself familiar with these groups, and then plan her meals so as to have represented in them at least one food from each, she will have gone far towards furnishing her family with an adequate and ideal diet. And if she will study the food groups, and see what foods must be sent to Europe, and substitute for them, as far as possible, other foods from the same group, she will be doing her bit to win the war, and her bit is a big one.

The first and most important group is the protein group. This class of food builds up broken-down tissues, forms new tissues, and can also be used as a source of heat, and nervous and muscular energy. It should, however, not be compelled to do double duty, and if we do not keep in our diet enough of the foods whose work it is to furnish the heat and energy, the protein, or muscle-building food, will be used, and our bodies will suffer. The examples of the protein food are — from the animal kingdom — meat, fish, eggs, cheese and milk; and from the vegetable kingdom, wheat, peas, beans, lentils and nuts.

The second group is called the carbohydrates, and they are used in the body as a source of nervous and muscular energy. They cannot, however, be used to build up the tissues, and for that reason must be used in combination with the protein group. Under this class we find the starchy foods, such as potatoes, macaroni, rice, bread, cereals, crackers, etc.; and the sugars, such as syrups, honey, jellies and candies.

The third group is represented by the fats and oils, such as butter, cream, olive oil, bacon, salt pork, and, in fact, all the edible fats and oils. Their special work is similar to that of the carbohydrates, — the yielding of heat and energy. They do not build and repair, and must not be used alone. There is little danger of this, however, for their very nature makes it impossible for one to eat a diet of pure fat. They are of especial value as heat-giving foods, and for this reason we find more fat included in the diet during the winter months, and in the diet of people living in cold climates. On the whole, fats are harder to digest than the carbohydrates, with the exception of butter, cream and bacon, all of which are easily and quite completely digested. Here I think it is well to say a word about butter fat. It has certain peculiar characteristics which make it necessary to the diet, especially that of children and invalids. The best grade of oleomargarine, which contains from one-third to one-fourth part butter fat, may be substituted in part for butter, if enough whole milk is included in the diet; but it is better to use butter substitutes for adults and for cooking purposes, and keep butter in the dietary of the child and the invalid.

Our fourth and last group, but by no means the least, is the mineral salts, with which is grouped the water. The mineral matter is very, very essential; too much cannot be said upon that subject. It is absolutely necessary in the blood, and needed to keep the bones and teeth in good condition. Minerals are found in varying amounts in nearly all foods, but those particularly rich in these salts are the fresh fruits, green vegetables, milk and eggs. In the diet for growing children, when bones and teeth are being constantly formed, plenty of mineral food is required. If the child does not have sufficient mineral food he will probably spend much time with the dentist in his latter years. One of the best ways to keep enough mineral in the diet of the child is to give him milk daily, a quart if possible, if not, two glasses, until he is at least twelve years old.

We must remember, too, that minerals are soluble in water, and if the vegetables, which are valued chiefly for their minerals, are cooked or soaked in water, and the water thrown away, the minerals will be almost wholly lost. It is always best to steam or bake vegetables, cook them in their jackets, or, if they are cooked in water, to use only a small amount so that it may be served with them. If, however, a large amount of water is used it must never be thrown away, but must be utilized in some way, such as cream soups, cream sauces or gravies.

Let us now consider the water. It regulates the temperature of the body, aids digestion, quenches the thirst and is needed in the blood and in every tissue of the body. One of its chief functions, however, is to regulate the body processes, and to carry off the waste matter. Few people drink too much water, but many fail to drink enough.

If a mother can train her child to drink at least two glasses of water the first thing every morning, and one glass on going to bed, she will have laid one of the corner stones for his future health. This can be made as much a part of the daily routine as the brushing of the teeth, and is quite as important. Besides this, at least one quart of water should be taken daily.

Something should also be said about the laxative quality of food. Often the diet does not contain enough bulky or indigestible, fibrous substances, which keeps the intestines full enough to stimulate their muscular movements and so keep the body healthy. Such substances are found in the vegetables, especially the green vegetables, cereals, coarse breads and the fruits, which not only furnish bulk, but acid, which also stimulates the action of the intestines.

That the diet should contain each of the food factors is true, but that the food should be prepared and served in a manner as attractive and appetizing as possible is also important. Cooking develops the flavor, changes the food into forms easier to masticate and digest, and destroys any bacteria which may be present. Good cooking is really the first stage in digestion, and the one the housekeeper can and should control. Food that is unappetizing does not stimulate the flow of the digestive juices, and is often incompletely digested, or, because of its unattractiveness, is not eaten, and so we get much plate waste that could be avoided were the food always temptingly served.

The food problem, then, is a real and vital one, and the home maker who has the welfare of her family at heart should make a thorough study of the food principles and then apply her knowledge to the best of her ability. She can render no greater service than that of providing attractive, tempting meals, so arranged that they contain all the food elements needed in the body, and yet do not contain to any great extent those foods that we must at the present time do our utmost to conserve.

REPORT OF DIVISION OF FOOD AND DRUGS.

During the month of November, 1917, samples were collected in 37 cities and towns.

There were 473 samples of milk examined, of which 67 were below the legal standard, 5 samples were skimmed milk not properly labeled and 10 samples contained added water.

There were 81 samples of food examined, of which 12 were adulterated. These consisted of 4 samples of decomposed eggs, 4 samples of compound lard not properly labeled, 2 samples of sausage containing coloring matter, 1 sample of soaked scallops and 1 sample of vinegar low in acid.

There were 40 samples of drugs examined, of which 8 were adulterated. These consisted of 6 samples of camphorated oil, 1 sample of spirit of nitrous ether and 1 sample of spirit of peppermint, deficient in the active ingredient.

The police departments submitted 16 samples of poisons and 5 samples of liquor for examination.

There were 12 convictions for violation of the laws, $135 in fines being imposed. Jesse Arruda, Antone Martin and Manuel and Frank

Perry of South Dartmouth, Philip Direne of Salem, Peter Gardes of Brockton, and Frank Gontarz of Ipswich were convicted for violation of the milk laws. The case of Antone Martin of South Dartmouth was prosecuted in collaboration with the milk inspector of New Bedford. The Davis Ice Cream Company of Cambridge, on two counts, Anthony O'Boy of Brockton, and Harry Dressler of Chelsea were convicted for violation of the food laws. John B. Healey of Lawrence and the Ropes Drug Company of Salem were convicted for violation of the drug laws.

There were 9 confiscations made, consisting of 415 pounds of tuberculous beef, 213 pounds of decomposed broilers, 385 pounds of decomposed pork shoulders, 75 pounds of decomposed tripe, 3¾ pounds of decomposed fowl, 13½ pounds of decomposed turkey, 6¾ pounds of tainted turkey, and 80 pounds of decomposed herring.

In accordance with the Acts of 1902, chapter 272, the following is the list of articles of adulterated food collected in original packages from manufacturers, wholesalers or producers: —

Two samples of milk containing added water, produced by Joseph Gamache of Leominster, 1 sample of vinegar low in acid, from J. L. Lutz of Salem, and 1 sample of soaked scallops from Bunting & Emery of Boston.

The licensed cold-storage warehouses report the following amounts of food placed in storage during the month of October, 1917: 472,680 dozens of case eggs, 43,405 pounds of broken-out eggs, 2,578,767 pounds of butter, 626,171½ pounds of poultry, 7,612 pounds of game, 6,920,079 pounds of fresh meat and fresh meat products, and 2,600,520 pounds of fresh food fish, making a total of 13,249,234½ pounds.

There was on hand in storage on Nov. 1, 1917, 12,944,030 dozens of case eggs, 538,618 pounds of broken-out eggs, and 18,951,492 pounds of butter, making a total of 32,434,140 pounds.

REPORT UPON THE WORK OF THE BACTERIOLOGICAL LABORATORY FOR THE MONTH OF NOVEMBER, 1917.

The following gives the number of bacteriological examinations made in the laboratory of the State Department of Health during the month of November, 1917: —

	Number of Examinations.	Diagnosis.		Release.	
		Positive.	Negative.	Positive.	Negative.
Diphtheria, ...	2,133	166	1,163	206	598

	Number of Examinations.	Positive.	Negative.	*Atypical.
Tuberculosis, ...	295	66	229	
*Typhoid fever (Widal test), . .	219	30	158	31
Typhoid fever (culture test), . .	39	5	34	
Malaria, ...	5	–	5	
Gonorrhœa, ...	201	19	182	
Miscellaneous, ...	43			

Total number of examinations made, 2,935.

RÉSUMÉ OF COMMUNICABLE DISEASES FOR NOVEMBER, 1917.

General Prevalence.

The total of 6,065 cases of communicable disease reported in November was a considerable increase compared with the October total of 4,287. This increase of 1,778 cases was confined chiefly to measles, chicken pox, mumps and whooping cough.

There was an increase of 643 cases of measles in November over the October total of 589 cases. Chicken pox reports increased from 263 to 669 cases, mumps from 160 to 361 cases, and scarlet fever, 440 to 587 cases.

Anthrax. — Four cases were reported during the month. Three of these were hide handlers in beam houses, and the other case was a dock hand who handled China goatskins.

Lobar Pneumonia. — The reports of this disease increased from 152 cases in October to 290 cases for November. With the exception of pulmonary tuberculosis, lobar pneumonia has the highest death rate of any of the communicable diseases in Massachusetts.

Diphtheria, Chronic Carrier. — An interesting case was the finding of a diphtheria carrier in a school where an outbreak of diphtheria occurred. Successive cultures from the nasal pharynx gave positive cultures for the diphtheria bacillus. The child was put under the care of a rhinologist who, on examination, found a partially decayed cherry stone in the nose. The stage of decomposition of the stone clearly showed that it had been in this position for several months. The stone was removed and all cultures taken since from the nose have been negative. The boy had diphtheria in August, 1916. It is probable that he has been a carrier ever since. In view of the above history it would seem desirable in all cases of chronic diphtheria carriers to make a nasal examination for foreign bodies which may result in clearing the nasal passages of the diphtheria bacillus.

Schick Tests. — This method of definitely ascertaining the individuals in any given group who are susceptible to diphtheria is particularly valuable in institutions where considerable groups of children are assembled. During the past month a few institutions in the Commonwealth have taken the opportunity of obtaining the material necessary for the Schick tests furnished by this Department, and carried out this test on the children in the institutions.

Measles. — This disease appeared in Massachusetts in two districts this autumn. One district is in the southern part of the Connecticut Valley, where the disease was centered in Westfield, whence it has spread to the near-by cities and towns. The other district is centered in and about Arlington, Somerville and Chelsea.

Typhoid Fever. — Most of the institutions in this State are now carrying out routine antityphoid and paratyphoid inoculations of the institutional staff. It is advisable to use "triple vaccine," so called, — that is, a mixed vaccine prepared from typhoid, paratyphoid A and paratyphoid B bacilli, — rather than the straight typhoid vaccine, which contains only typhoid bacilli.

Typhoid Fever Carrier. — The Boston health department reported an interesting typhoid carrier during the month. The carrier had typhoid fever in June, 1917, and repeated examinations showed that he had bacilluria, typhoid bacilli being found constantly in his urine but none in his feces. Repeated examinations for a few days showed no bacilli in the urine, with the result that he was permitted to go home. Within a month two cases of typhoid fever were reported from his home, and examination showed that he still had typhoid bacilli in his urine.

Diseases on the Premises of Milk Handlers. — Four cases of communicable disease occurred on the premises of milk dealers, 2 of these being diphtheria on farms, 1 case of scarlet fever in a milk handler, and 1 case of poliomyelitis on a farm. No secondary cases followed so far as known.

EPIDEMICS AND OUTBREAKS.

Diphtheria in Amesbury. — There were 41 cases reported in this town during November. Investigation showed the outbreak to be among children of school age, but not centered in any particular school. Extensive culturing of school children has been carried out by the school physician, and the outbreak shows signs of abating.

Diphtheria in North Attleborough. — In this town there were 33 cases in October and 18 in November. In November members of the local board of health and school physicians, assisted by the State District Health Officer, carried out a detailed culturing and immunization of patients, suspected cases and school children, with the result that the outbreak has been checked. Many of the cases were of a mild nasal type, and would have escaped notice unless nose and throat cultures had been taken.

Correction. — The reference in the November Bulletin on Diphtheria in North Attleborough was an error. It referred to the town of Randolph, where there were 14 cases of diphtheria in October and 2 cases in November.

Diphtheria in Baldwinsville. — There were 6 cases reported from the Hospital Cottages for Children, Baldwinsville. The outbreak started with a nurse who was taken sick, and 5 cases followed of children in contact with her. Immediate culturing of the whole institution and isolation of the cases by the institutional authorities stopped the outbreak.

Scarlet Fever in Montague. — An outbreak of 17 cases occurred in Turners Falls Village, Montague, in November. The disease has been constantly present in this town for the past year, and, when given the opportunity, flares up, so that careful investigation and public health work will be necessary to locate the centers from which the infection is spread.

Measles in Chesterfield. — In this town an outbreak of 40 cases was reported in November. This outbreak started during the last few days in October, when 4 cases were reported. Investigation showed that the first case was a nineteen-year-old patient who arrived home in Chesterfield from a visit in Boston, and the second case was a girl who worked with the previous case. The cases immediately following were sister and brothers of this second case, and from these the school outbreak resulted.

Rare Diseases.

Actinomycosis was reported from Danvers (1), and Westwood (1).

Anterior poliomyelitis was reported from Boston (1), Cheshire (1), Lowell (2), Ludlow (1), Lynn (2), Needham (1), Somerset (1) and Springfield (1).

Anthrax was reported from Boston (1) and Woburn (3).

Dog bite was reported from Boston (2), Brockton (1) and Holyoke (1).

Dysentery was reported from Barnstable (3).

Epidemic cerebrospinal meningitis was reported from Arlington (1), Boston (5), Brookline (1), Fall River (3), Lowell (1), Northampton (1), Salem (1), Springfield (1), Wilbraham (1) and Worcester (1).

Malaria was reported from Brockton (1) and Sutton (1).

Pellagra was reported from Northampton (1).

Septic sore throat was reported from Boston (1), Brookline (1), Chicopee (1), Haverhill (1), Lowell (1), Medford (1), Melrose (1) and Newburyport (3).

Smallpox was reported from Boston (1).

Tetanus was reported from Gardner (1), New Bedford (1), Sterling (1), Westfield (1) and Worcester (1).

Trachoma was reported from Boston (7), Chelsea (1) and Wakefield (1).

DISTRIBUTION.

All Communicable Diseases.

	October, 1917.	November, 1917.	November, 1916.
Total cases,	4,288[1]	6,055	3,583
Case rate per 100,000 population,	111.4	157.4	94.8

Certain Prevalent Diseases.

	October, 1917.	November, 1917.	November, 1916.	Cities and Towns noticeably exceeding their Endemic Indexes.[2]
Diphtheria: —				Boston, . . . (205) 414 North Attleborough, (1) 18 Amesbury, . . (0) 41 Chelsea, . . . (7) 27 Lowell, . . . (26) 47 Gardner, . . . (5) 28 Springfield, . . (23) 60
Total cases,	1,152	1,181	593	
Case rate per 100,000 population,	29.9	30.7	15.7	
Measles: —				Chelsea, . . . (5) 51 Mattapoisett, . . (0) 12 Everett, . . . (10) 45 Arlington, . . (0) 72 Chesterfield, . . (0) 43 Holyoke, . . . (17) 115 South Hadley, : (2) 20 Westfield, . . (1) 287
Total cases,	589	1,232	724	
Case rate per 100,000 population,	15.3	32.0	19.2	
Scarlet fever: —				Springfield, . . (9) 52 Montague, . . (1) 19
Total cases,	440[1]	587	376	
Case rate per 100,000 population,	11.4	15.3	9.9	
Typhoid fever: —				Fall River, . . (12) 31
Total cases,	246	120	115	
Case rate per 100,000 population,	6.4	3.1	3.0	
Whooping cough: —				
Total cases,	236	421	201	
Case rate per 100,000 population,	6.1	10.9	5.3	
Tuberculosis, pulmonary: —				
Total cases,	689[1]	705	540	
Case rate per 100,000 population,	17.9	18.3	14.3	
Tuberculosis, other forms: —				
Total cases,	53	85	43	
Case rate per 100,000 population,	1.4	2.2	1.1	

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[1] The diagnosis in certain cases has been revoked since the October Bulletin was issued.

[2] Endemic index signifies the average for five years of reported cases exclusive of epidemics. This index is applied to each city and town for each month for the more common communicable diseases. The numbers in parentheses after the names of each city and town indicate the endemic index for that city or town; the numbers without parentheses indicate the cases reported during the current month.

INTERSTATE RECIPROCAL NOTIFICATION IN NOVEMBER.

Disease and Locality of Notification.	Health Authority referred to.	Why referred.
Malaria; Pittsfield,	State Board of Health, Bowling Green, Ky.	Patient came to Pittsfield from Beaver Dam, Ky. September 25 admitted to House of Mercy Hospital, Pittsfield, with malaria. Patient stated he had had previous attacks. Returned to Kentucky October 5.
Pneumonia (lobar); Pittsfield,	State Department of Health, Albany, N. Y., Nov. 26, 1917.	Came to House of Mercy Hospital, Pittsfield, ill from Stephentown, N. Y. Died Nov. 22, 1917.
Poliomyelitis; Lynn,	State Department of Health, Augusta, Me., Nov. 15, 1917.	Patient showed first symptoms November 3 while in Foxcroft, Me., where she had been for six weeks. Had been at Camp Ellis, Me., from June 1 until she went to Foxcroft.
Scarlet fever; Pittsfield,	State Department of Health, Albany, N. Y., Nov. 10, 1917.	Case was brought to the House of Mercy Hospital, Pittsfield, from Canaan, N. Y.
Tuberculosis (pulmonary); Pittsfield.	State Department of Health, Albany, N.Y., Nov. 6, 1917.	Case came from Nassau, N. Y., October 31. Died at Pittsfield Nov. 5, 1917.
Tuberculosis (pulmonary); East Bridgewater.	State Department of Health, Augusta, Me., Nov. 14, 1917.	Case reported November 12 by East Bridgewater board of health at Millet's Sanatorium. Home address is Biddeford, Me.
Typhoid fever; Tiverton, R. I.	State Board of Health, Providence, R. I., Nov. 10, 1917.	Case reported by Fall River board of health. Patient lived on State Street, Tiverton, R. I.
Typhoid fever; North Adams,	State Board of Health, Burlington, Vt., Nov. 10, 1917.	Case reported November 1. Ill about one month. First seen by physician October 24. Visited in Readsboro, Vt., September 20 to September 24.
Typhoid fever; Rowley,	State Board of Health, Concord, N. H., Nov. 21, 1917,	Patient was a school teacher at Hampton, N. H. When her illness began she returned to Rowley.
Typhoid fever; Springfield,	State Department of Health, Hartford, Conn., Nov. 21, 1917.	Patient visited Madison, Conn., on October 24. Date of onset, October 25.
Typhoid fever; Quincy,	State Board of Health, Concord, N. H., Nov. 23, 1917.	Patient spent vacation in Bristol, N. H., in August. Onset, August 25. Died Sept. 16, 1917.
Typhoid fever; Wareham,	State Board of Health, Concord, N. H., Nov. 28, 1917.	Patient at boys' camp, Danbury, N. H., from August 23 to September 2. From the camp he went to Bartlett, N. H., thence to Weirs, N. H., returning to Wareham September 5. Onset during week ending September 29.
Typhoid fever; North Adams,	State Department of Health, Hartford, Conn., and Department of Health, New York City, Nov. 30, 1917.	Patient was in South Norwalk, Conn., November 10 and 11, and November 12 and 13 was in New York City, at known addresses. Onset about November 4.

OCCUPATIONAL DISEASES REPORTED BY THE STATE BOARD OF LABOR AND INDUSTRIES.

DISEASE.	Occupation.	Locality.	Sex.	Age.	Color.
Anthrax,	Beamer,	Woburn,	M	31	W
Anthrax,	Beamer,	Woburn,	M	32	W
Anthrax,	Dock hand,	Boston,	M	51	W
Anthrax,	Leather worker,	Woburn,	M	45	W
Carbon monoxide,	Cupola charger,	Newton,	M	40	W
Carbon monoxide,	Cupola charger,	Newton,	M	40	W
Carbon monoxide,	Cupola charger,	Newton,	M	35	W
Fumes (nitrous),	Watchman,	Lynn,	M	42	W
Lead poisoning,	Painter,	Boston,	M	45	W
Lead poisoning,	Painter,	Boston,	M	42	W
Wood alcohol,	Mixer,	Worcester,	M	38	W

CASES AND DEATHS FROM DISEASES DANGEROUS

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1	Massachusetts,	3,849,006	11	3	263	1	1,152	80	19	–	152	172	589	9
2	Cities over 200,000.													
3	Boston,	778,500	–	–	34	–	309	19	3	–	23	49	148	3
4	Cities, 150,000–200,000.													
5	Worcester,	170,077	–	–	4	–	87	14	–	–	15	7	7	1
6	Cities, 100,000–150,000.	*570,968*	*4*	*2*	*21*	*1*	*151*	*10*	*4*	–	*41*	*21*	*71*	*4*
7	Fall River,	127,218	1	–	2	–	22	2	–	–	9	3	1	–
8	New Bedford,	115,272	–	–	6	–	13	–	1	–	14	6	24	3
9	Cambridge,	110,582	–	–	5	1	28	–	1	–	8	5	8	–
10	Springfield,	109,174	2	1	5	–	61	7	2	–	8	4	36	1
11	Lowell,	108,722	1	1	3	–	27	1	–	–	2	3	2	–
12	Cities, 50,000–100,000.	*511,498*	*1*	–	*32*	–	*133*	*13*	*4*	–	*17*	*25*	*57*	–
13	Lynn,	98,659	–	–	3	–	12	–	1	–	3	3	1	–
14	Lawrence,	92,187	–	–	6	–	23	2	–	–	–	2	1	–
15	Somerville,	91,102	–	–	2	–	21	1	–	–	4	6	5	–
16	Brockton,	64,668	–	–	3	–	6	–	–	–	3	4	2	–
17	Holyoke,	62,179	–	–	1	–	30	4	3	–	–	4	37	–
18	Haverhill,	51,806	1	–	10	–	17	2	–	–	6	4	3	–
19	Malden,	50,897	–	–	7	–	24	4	–	–	1	2	8	–
20	Cities and Towns, 25,000–50,000.	*498,330*	*1*	–	*56*	–	*125*	*7*	*1*	–	*19*	*23*	*84*	–
21	Chelsea,	48,273	1	–	–	–	24	2	1	–	3	4	24	–
22	Newton,	44,573	–	–	5	–	13	1	–	–	3	1	–	–
23	Quincy,	44,221	–	–	–	–	5	–	–	–	–	1	7	–
24	Pittsfield,	42,913	–	–	10	–	2	–	–	–	2	2	2	–
25	Fitchburg,	40,464	–	–	1	–	27	1	–	–	3	4	1	–
26	Salem,	39,872	–	–	21	–	2	–	–	–	–	1	35	–
27	Everett,	39,588	–	–	1	–	23	3	–	–	–	–	11	–
28	Taunton,	37,001	–	–	1	–	1	–	–	–	–	4	–	–
29	Brookline,	36,007	–	–	6	–	1	–	–	–	1	–	1	–
30	Medford,	33,758	–	–	5	–	7	–	–	–	3	2	2	–
31	Chicopee,	32,230	–	–	1	–	2	–	–	–	4	2	–	–
32	Waltham,	31,179	–	–	5	–	12	–	–	–	–	2	1	–
33	Revere,	28,251	–	–	–	–	6	–	–	–	–	–	–	–
34	Cities and Towns, 10,000–25,000.	*569,407*	*1*	–	*47*	–	*186*	*8*	*6*	–	*17*	*14*	*132*	*1*
35	Beverly,	24,863	–	–	–	–	2	–	–	–	1	1	1	–
36	Gloucester,	24,513	–	–	1	–	3	1	–	–	1	1	1	–
37	Northampton,	22,636	–	–	6	–	3	1	–	–	–	–	1	–
38	North Adams,	22,042	–	–	–	–	2	–	–	–	–	–	–	–
39	Peabody,	19,908	–	–	–	–	–	–	–	–	–	2	1	–
40	Attleboro,	19,480	–	–	7	–	2	–	–	–	–	–	1	–
41	Westfield,	19,456	–	–	–	–	3	2	1	–	5	–	109	1
42	Watertown,	18,123	–	–	–	–	6	–	–	–	–	1	–	–
43	Leominster,	17,675	–	–	1	–	2	1	1	–	1	–	–	–
44	Melrose,	17,394	–	–	10	–	12	–	–	–	–	1	–	–
45	Framingham,	17,146	–	–	–	–	3	–	1	–	2	–	1	–
46	Gardner,	17,116	–	–	4	–	37	–	–	–	–	–	–	–
47	Woburn,	16,896	–	–	–	–	5	–	–	–	–	1	–	–
48	Arlington,	16,524	–	–	–	–	5	–	–	–	–	4	9	–
49	Marlborough,	15,546	–	–	–	–	4	–	–	–	–	–	1	–
50	Newburyport,	15,470	–	–	–	–	2	–	–	–	1	1	1	–
51	Methuen,	15,137	–	–	–	–	2	–	–	–	–	–	1	–

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[1] Owing to the delay by physicians in returning death certificates sent them for addition and correc-

TO THE PUBLIC HEALTH,[1] OCTOBER, 1917.

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28-29 Tuberculosis, Pulmonary.		30-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		176A Dog Bite.		14 Dysentery.		100 Septic Sore Throat.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
160	1	210	–	440	6	689	309	53	57	246	22	236	14	11	5	9	–	12	2	8	2	1
																						2
43	–	102	–	74	5	213	73	12	9	22	–	61	3	4	2	2	–	–	–	1	–	3
																						4
3	–	19	–	22	–	20	18	2	4	7	1	1	–	1	1	–	–	–	–	–	–	5
12	–	*32*	–	*74*	–	*141*	*41*	*16*	*15*	*84*	*9*	*49*	*4*	*2*	–	*1*	–	*1*	–	–	–	6
9	–	13	–	4	–	44	7	6	4	55	6	9	1	1	–	–	–	–	–	–	–	7
–	–	8	–	11	–	36	7	6	5	12	2	4	–	–	–	–	–	1	–	–	–	8
2	–	4	–	7	–	23	12	3	2	3	–	19	1	1	–	–	–	–	–	–	–	9
–	–	3	–	46	–	19	9	1	2	10	1	10	1	–	–	–	–	–	–	–	–	10
1	–	4	–	6	–	19	6	–	2	4	–	7	1	–	–	1	–	–	–	–	–	11
17	*1*	*20*	–	*44*	–	*79*	*45*	*6*	*9*	*18*	*4*	*41*	*1*	*2*	–	*2*	–	*3*	–	–	–	12
–	–	3	–	5	–	12	13	2	2	8	–	5	–	–	–	–	–	–	–	–	–	13
1	–	1	–	1	–	11	10	1	2	3	1	1	–	–	–	1	–	3	–	–	–	14
1	–	5	–	14	–	17	4	1	2	2	2	1	–	–	–	–	–	–	–	–	–	15
10	–	8	–	4	–	10	4	2	2	3	–	23	–	–	–	1	–	–	–	–	–	16
–	–	1	–	8	–	6	5	–	1	–	–	3	1	1	–	–	–	–	–	–	–	17
5	–	2	–	6	–	11	5	–	–	–	1	1	–	–	–	–	–	–	–	–	–	18
–	1	–	–	6	–	12	4	–	–	2	–	7	–	1	–	–	–	–	–	–	–	19
9	–	*19*	–	*55*	–	*83*	*28*	*10*	*5*	*16*	*1*	*37*	*2*	*1*	*1*	–	–	*1*	–	*1*	*1*	20
–	–	5	–	1	–	11	2	–	–	4	–	2	–	1	1	–	–	–	–	–	–	21
4	–	–	–	2	–	6	2	1	1	–	–	16	–	–	–	–	–	–	–	–	–	22
–	–	2	–	6	–	11	4	2	1	1	–	–	–	–	–	–	–	–	–	–	–	23
–	–	2	–	10	–	4	1	3	2	–	–	2	1	–	–	–	–	–	–	–	–	24
3	–	–	–	4	–	6	1	1	1	1	–	1	–	–	–	–	–	–	–	–	–	25
1	–	2	–	1	–	6	2	1	–	–	–	3	–	–	–	–	–	1	–	–	–	26
–	–	4	–	4	–	6	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	27
–	–	1	–	6	–	18	8	–	–	1	–	–	–	–	–	–	–	–	–	–	–	28
1	–	1	–	10	–	3	1	–	–	–	–	12	–	–	–	–	–	–	–	–	–	29
–	–	1	–	7	–	3	2	2	–	5	–	–	–	–	–	–	–	–	–	1	–	30
–	–	1	–	1	–	7	3	–	–	–	–	1	1	–	–	–	–	–	–	–	–	31
–	–	–	–	1	–	1	1	–	–	1	–	–	–	–	–	–	–	–	–	–	1	32
–	–	–	–	2	–	1	–	–	–	2	1	–	–	–	–	–	–	–	–	–	–	33
57	–	*10*	–	*98*	–	*86*	*36*	*3*	*5*	*25*	*1*	*31*	*2*	–	*1*	*1*	–	*1*	–	*1*	–	34
–	–	3	–	2	–	3	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	35
–	–	–	–	2	–	1	2	–	–	3	1	–	–	–	–	–	–	–	–	1	–	36
–	–	–	–	20	–	6	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	37
–	–	–	–	1	–	5	2	–	–	2	–	–	–	–	–	–	–	–	–	–	–	38
–	–	–	–	–	–	5	2	–	–	–	–	2	–	–	–	–	–	–	–	–	–	39
–	–	–	–	1	–	4	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	40
–	–	–	–	9	–	6	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	41
–	–	–	–	4	–	7	2	–	–	1	–	1	–	–	–	–	–	–	–	–	–	42
–	–	–	–	1	–	3	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	43
–	–	1	–	7	–	2	–	–	–	1	–	2	–	–	–	–	–	–	–	–	–	44
–	–	–	–	1	–	7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	45
–	–	–	–	3	–	3	2	–	–	–	–	1	–	–	–	–	–	–	–	–	–	46
–	–	–	–	3	–	2	–	1	–	3	–	–	–	–	–	–	–	–	–	–	–	47
1	–	–	–	6	–	4	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	48
–	–	–	–	–	–	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	49
2	–	2	–	2	–	2	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	50
–	–	–	–	–	–	1	2	–	–	–	–	–	–	–	1	–	–	–	–	–	–	51

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tion, the deaths given above, while approximately correct, are not absolutely complete.

Cases and Deaths from Diseases Dangerous

Line No.	Cities and Towns grouped in Order of Population.	Population estimated as of July 1, 1917.	63A Anterior Poliomyelitis.		19A Chicken Pox.		9 Diphtheria.		19B German Measles.		92 Lobar Pneumonia.		6 Measles.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
52	Southbridge, ...	14,930	-	-	-	-	2	-	-	-	-	-	-	-
53	Weymouth, ...	14,444	-	-	-	-	5	-	-	-	-	-	-	-
54	Milford, ...	13,962	-	-	-	-	5	-	-	-	-	-	-	-
55	Winthrop, ...	13,918	-	-	-	-	1	-	2	-	2	-	-	-
56	Greenfield, ...	13,590	-	-	13	-	5	-	-	-	-	1	1	-
57	Wakefield, ...	13,389	-	-	-	-	-	-	-	-	-	-	-	-
58	Adams, ...	13,302	-	-	-	-	3	-	-	-	1	-	-	-
59	Plymouth, ...	13,272	-	-	-	-	8	-	1	-	-	-	-	-
60	Clinton, ...	13,243	-	-	-	-	-	-	-	-	-	-	-	-
61	Webster, ...	13,031	-	-	-	-	5	-	-	-	-	-	-	-
62	Norwood, ...	12,286	-	-	1	-	1	-	-	-	1	-	-	-
63	West Springfield, ...	12,273	-	-	-	-	10	-	-	-	-	1	-	-
64	Danvers, ...	11,955	1	-	-	-	13	-	-	-	1	-	-	-
65	Dedham, ...	11,820	-	-	2	-	11	-	-	-	-	-	2	-
66	Natick, ...	11,673	-	-	-	-	2	-	-	-	-	-	-	-
67	Saugus, ...	11,189	-	-	-	-	2	-	-	-	-	-	-	-
68	Easthampton, ...	10,430	-	-	-	-	12	1	-	-	1	-	2	-
69	Athol, ...	10,330	-	-	2	-	6	2	-	-	-	-	-	-
70	Winchester, ...	10,312	-	-	-	-	-	-	-	-	-	-	-	-
71	Bridgewater, ...	10,129	-	-	-	-	2	-	-	-	-	-	-	-
72	Towns, 5,000-10,000.	*355,823*	*3*	*1*	*39*	-	*96*	*3*	*1*	-	*13*	*19*	*24*	-
73	Towns, 2,500-5,000.	*181,232*	*1*	-	*10*	-	*31*	*4*	-	-	*5*	*5*	*12*	-
74	Towns under 2,500.	*213,171*	-	-	*18*	-	*34*	*2*	-	-	*2*	*9*	*54*	-
75	State Infirmary.	-	-	-	*2*	-	-	-	-	-	-	-	-	-

In addition to the above there occurred 8 cases of anthrax, 1 at Camp Devens, 2 in Lynn, 1 in Winchester Boston, 1 in Chelsea, 1 in Douglas, 1 in Marblehead and 1 in Pittsfield; 4 cases of pellagra, 1 in Boston, Boston; 1 case of tetanus in Pittsfield; and 8 cases of trachoma, 5 in Boston, 1 in Cambridge, 1 in Fitch-

TO THE PUBLIC HEALTH — *Concluded.*

19C Mumps.		38A Ophthalmia Neonatorum.		7 Scarlet Fever.		28-29 Tuberculosis, Pulmonary.		30-35 Tuberculosis, Other Forms.		1 Typhoid Fever.		8 Whooping Cough.		61A Cerebrospinal Meningitis.		176A Dog Bite.		14 Dysentery.		100 Septic Sore Throat.		
Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Line No.
–	–	1	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	52
–	–	–	–	–	–	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	53
1	–	–	–	1	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	54
–	–	–	–	6	–	2	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	55
42	–	–	–	3	–	2	–	–	–	1	–	–	–	–	–	–	–	1	–	–	–	56
–	–	–	–	–	–	–	2	1	–	–	–	–	1	–	–	–	–	–	–	–	–	57
–	–	–	–	–	–	2	1	–	–	3	–	–	–	–	–	–	–	–	–	–	–	58
–	–	1	–	1	–	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	59
7	–	–	–	5	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	60
–	–	1	–	–	–	–	1	–	1	1	–	6	–	–	–	–	–	–	–	–	–	61
–	–	–	–	2	–	2	–	–	–	–	–	4	–	–	–	–	–	–	–	–	–	62
–	–	–	–	8	–	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	63
1	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	64
–	–	–	–	4	–	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	65
–	–	–	–	3	–	1	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	66
–	–	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	67
3	–	–	–	–	–	1	1	–	–	–	–	14	–	–	–	–	–	–	–	–	–	68
–	–	–	–	1	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	69
–	–	–	–	–	–	–	–	–	–	1	–	–	1	–	–	–	–	–	–	–	–	70
–	–	–	–	1	–	1	4	–	1	–	–	–	–	–	–	–	–	–	–	–	–	71
4	–	*5*	–	*39*	*1*	*29*	*26*	*2*	*4*	*15*	*4*	*13*	*1*	–	–	–	–	*3*	*1*	*5*	*1*	72
3	–	*1*	–	*6*	–	*20*	*17*	*1*	*2*	*9*	–	*3*	*1*	*1*	–	*3*	–	*3*	–	–	–	73
12	–	*2*	–	*27*	–	*12*	*11*	–	*1*	*11*	*1*	–	–	–	–	–	–	–	*1*	–	–	74
–	–	–	–	*1*	–	*6*	*14*	*1*	*3*	*39*	*1*	–	–	–	–	–	–	–	–	–	–	75

and 4 in Woburn, with 2 deaths in Woburn also; 1 death from leprosy in Gosnold; 7 cases of malaria, 3 in 1 in Lowell, 1 in Worcester State Hospital and 1 at the Tewksbury State Infirmary, with 1 death in burg and 1 in Worcester.

MASSACHUSETTS STATE DEPARTMENT OF HEALTH.

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John T. Wheelwright.

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The Eastern District, ...	Merrill E. Champion, M.D., Wollaston.
The Northeastern District, . . .	Arthur A. Brown, M.D., Swampscott.
The North Midland District, . . .	Charles E. Simpson, M.D., Lowell.
The South Midland District, . .	William W. Walcott, M.D., Natick.[1] George T. O'Donnell, M.D., Waltham.[2]
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The Connecticut Valley District, . .	John S. Hitchcock, M.D., Northampton.
The Berkshire District, ...	Howard A. Streeter, M.D., Pittsfield.

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[1] Leave of absence, military service.

[2] At a meeting of the Public Health Council of the State Department of Health on Oct. 30, 1917, it was voted that Dr. George T. O'Donnell be appointed as permanent State District Health Officer.

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